ANSWER KEY FOR UPSC CAPF 2023 PAPER 1

T.B.C.: FIAS-PTS20-L2F8 Test Booklet Series

GENERAL ABILITY AND INTELLIGENCE

A

Time Allowed: Two hours Maximum Marks: 250

1. The Answer keys are subjected to **2% error.**

2. For any controversy in the answer key please **WhatsApp / Telegram to 7057227225/Missioncapfhub@gmail.com**

3. The answer keys are marked in **Red / (Bold)** – Dark Black (printout)

4. **Expected cut off for CAPF 2023** will be announced by Thursday (10.08.2023) on our Website (**www.missioncapfhub.com**), official telegram channel **@missioncapfhub**

5. We have provided **detailed explanation & reference** of every question in this document.

OUR UPCOMING COURSES FOR CAPF 2024 & CDS 2023-24

1. **Specialized Mentorship Program [SMP]** for CAPF 2024 & CDS 2023-24.
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4. **CAPF Paper 2 Test Series** with Evaluation for CAPF 2024.
5. **Yalgaar Daily Answer Writing** [DAW] program for CAPF 2024.

Q.1 Pointing towards a photograph Mr. Ajit said, "She is my father's wife's son's only sister."

What is the relation of the person in the photograph with Mr. Ajit ?

(a) Daughter

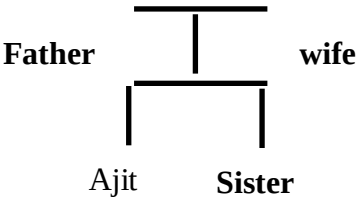
(b) Mother's sister

(c) Cousin

(d) Sister

Answer: D

Explanations:



Q.2 Three circles of radius 5 cm each, touch each other. If the points of contact are P, Q and R, then what is the area of the triangle PQR in sq. cm?

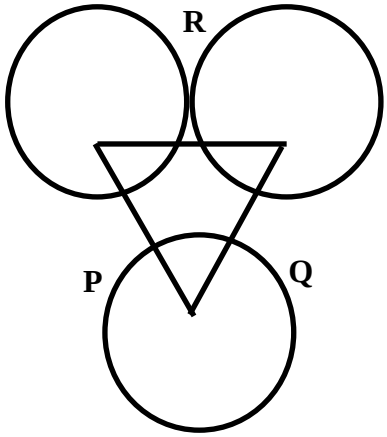
(a) $\frac{25\sqrt{3}}{6}$

(b) $\frac{25\sqrt{3}}{4}$

(c) $\frac{25\sqrt{3}}{2}$

(d) $25\sqrt{3}$

Answer: b



Consider ΔADF

From triangle ABC, all sides are equal.

∠A=60o [equilateral triangle]

AF=AD

∠F=∠D=x(let) [If 2 sides are equal then their opposite angles are also equal]

x+x+60=180

⇒2x=120

⇒x=60o

ADF is a equilateral triangle

DF=AD=5 cm.

Area of this triangle =(sqrt(3) / 4) × a^2

= 25 Sqrt(3) / 4

Q.3 The right-angled triangle ABC is such that < B = 900. Point D is picked on BC such that triangles ABC and DBA are similar. If AB: BC = m: n, what is area of triangles ABC: area of triangles ABD?

(a) n:m

(b) n^2:m^2

(c) (m+n): n

(d) (m+n)^2: n^2

Answer: b

Explanation: The ratio of the areas of two similar triangles is equal to the ratio of the square of any two corresponding sides.

A (ABC):A(ABD)= BC^2/ AB^2= n^2/m^2

Q.4 On a large ground, there is a straight tall vertical wall of length 28 m. A goat is tied to a point on the ground which is at the middle of the wall, using a rope. If the length of the rope is 21 m, what is the area of the region (in sq. m) around the wall that the goat can access?

(a) 847

(b) 851

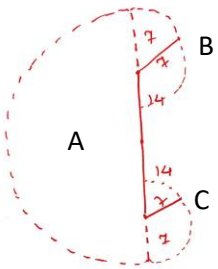
(c) 693

(d) 654

Answer: a

Explanation:

Goat will cover the dotted area.



Area of part A= A=πr^2/ 2

=(22 x 21x 21)/(2x7)

=693

Area of part B and C

= 2(πr^2/ 2)

= 2 (22x 7 x7) / (2x7)

= 154

Total covered= 693+154= 847

Q.5 A rectangular wall is divided into four squares of equal size where there are two rows each having two squares. The top left square is coloured with green. If, including green, there are three colours available and each square is coloured using any one of these three colours such that no two adjacent squares get painted with the same colour; then how many colour combinations are possible?

(a) 2

(b) 4

(c) 6

(d) 8

Answer: C

Suppose that colors are green, yellow and red.

Here, 6 possibilities would be formed.

There are only six combinations.

1) G Y
   R G

2) G R
   Y G

3) G R
   R G

4) G Y
   Y G

5) G Y
   Y R

6) G R
   R Y

Q.6 Which of the following statements about National Emergency (is / are) correct?

1. A Proclamation of Emergency may be made by the President only when the security of India or any part is threatened by war or external aggression or armed rebellion.

2. The Government of India acquires power to give directions to a State on any matter.

3. The Proclamation of Emergency does not suspend the State legislature.

4. The Proclamation of' Emergency can continue for a maximum period of six months at a time only if approved by resolutions of both the Houses of Parliament.

Select the correct answer using the code given below:

(a) 1only

(b) 1 and 2 only

(c) 1, 2 and 3 only

(d) 2, 3 and 4 only

Answer: -d

Explanation – Under article 352, the president can declare a National emergency when the security of India or a part of it is threaten by war or external aggression or armed rebellion. It may be noted that the president can declare in National emergency even before the actual occurrence of war or external aggression or armed rebellion, if he is satisfied that there is an eminent danger.

Source – laxmikant Chapter- emergency provisions

Q.7 Which one of the following statements with regard to the impeachment of a Judge of the Supreme Court of India is not correct?

(a) A motion addressed to the President, signed by at least 100 members of both the Houses of the Parliament is delivered to the Speaker.

(b) The motion is investigated by a Committee Of three (2 Judges of the Supreme Court and a distinguished Jurist).

(c) If the Committee finds the Judge guilty of misbehaviour or that he suffers from incapacity, the motion together with the report of the Committee is taken up for consideration in the House where the motion is pending

(d) The Judge will be removed after the President gives his order for removal.

Answer: - A

The Judges Enquiry Act (1968) regulates the are procedure relating to the removal of a judge of the Supreme Court by the process of impeachment:

1. A removal motion signed by 100 members (in the case of Lok Sabha) or 50 members (in the case of Rajya Sabha) is to be given to the Speaker Chairman.

2. The Speaker Chairman may admit the motion or refuse to admit it.

3. If it is admitted, then the Speaker/Chairman is to constitute a three-member committee to investigate into the charges.

4. The committee should consist of (a) the chief justice or a judge of the Supreme Court, (b) a chief justice of a high court, and (c) a distinguished jurist.

5. If the committee finds the judge to be guilty of misbehaviour or suffering from an incapacity. The House can take up the consideration of the motion.

6. After the motion is passed by each House of Parliament by special majority, an address is presented to the president for removal of the judge.

7. Finally, the president passes an order removing the judge.

Reference: M. Laxmikant , Chapter 26 , PAGE no. 26.3

Q.8. Which of the following are India's G20 priorities?

1. Green Development

2. Women-led Development

3. Climate Finance

4. Digital Public Infrastructure

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 1, 2 and 3 only

(c) 3 and 4 only

(d) 1, 2, 3 and 4

Answer: d

Explanation: India's G20 priorities are in these areas:

Green Development, Climate Finance and LiFE; Accelerated, Inclusive & Resilient Growth; Accelerating progress on SDGs; Multilateral Institutions for the 21st century; Technological Transformation & Digital Public Infrastructure; and Women-led development.

These are non-binding economic issues: learning from each other and sharing information and best practices.

Q.9 Which of the following are the objectives of SAARC?

1. To promote the welfare of the peoples of South Asia and to improve the quality of life.

2. To promote and strengthen collective self-reliance among the countries of South Asia.

3. To contribute to mutual trust, understanding and appreciation of one another's problems.

4. To work towards ending terrorism.

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 1, 2 and 3 only

(c) 1, 2, 3 and 4

(d) 3 and 4 only

Answer: B

Explanation: Objectives of the SAARC:

- To **promote the welfare** of the people of South Asia and to improve their quality of life.
- To **accelerate economic growth,** social progress and cultural development in the region and to provide all individuals the opportunity to live in dignity and to realize their full potentials.
- To **promote and strengthen collective self-reliance** among the countries of South Asia.
- To **contribute to mutual trust,** understanding and appreciation of one another's problems..

- To **promote active collaboration** and mutual assistance in the economic, social, cultural, technical and scientific fields.
- **To strengthen cooperation with other developing countries.**
- To **strengthen cooperation among themselves in international forums** on matters of common interests, and
- To cooperate with international and regional organizations with similar aims and purposes.
- On official website of SAARC, they have not mentioned about to work towards ending terrorism as its objective.

Reference: https://www.saarc-sec.org/

10. Pure, demineralized water, free from all soluble mineral salts is obtained by which of the following method?

(a) Passing water through microfiltration membrane.

(b) Calgon's method

(c) Passing water through a cation exchange and an anion exchange resin bed

(d) By Boiling

ANSWER: C

Explanation: To complete the demineralization process water from the cation unit is passed through a strong base anion exchange resin in the hydroxide form. When hard water is passed through cation exchange resin SO_4^{-2} and Cl^{-2} ion water are replaced by H^+ ions from the resin.

Reference: Class 11 Chemistry Unit 9 Hydrogen PAGE NO. 285

11. Consider the following redox reaction:

$2CU_2O(s) + Cu_2S(s) \rightarrow 6Cu(s) + SO_2(g)$

Identify the species among the following acting as oxidant and reductant, respectively:

(a) Cu(I) and S of Cu_2S

(b) Cu and S of SO_2

(c) Cu and O of SO_2

(d) CU(I) and O of SO_2

ANSWER: A
Explanation: If a substance gains oxygen during reaction it is said to be oxidized. If a substance loses oxygen during a reaction it is said to be reduced. Here the Cu is the Oxidant and S of copper sulphate is the reluctant.

Reference: Class 10 chemistry Chapter 1 page 12

12. Which one of the following statements is not correct regarding the setting of cement?

(a) The addition of a small percentage of gypsum ($CaSo_4$) lengthens the setting period of cement.

(b) According to the colloidal theory, gels of hydrated silicates are formed and when these gels harden, the set cement loses strength.

(c) Tricalcium silicate is responsible for the initial setting of cement.

(d) Dicalcium silicate and tricalcium silicate are responsible for the final strength which occurs in about a year.

Answer: B

Explanation:

Concrete gains strength with time through a process called hydration. When water is mixed with the cement, it starts a chemical reaction known as hydration. This reaction forms chemical bonds between the water molecules and the cement particles, creating a paste-like substance. As time passes, this paste starts to harden and solidify, gradually transforming into a strong and durable material. The hydration process continues for months and even years, resulting in a significant increase in concrete's strength.

During hydration, the cementitious materials in concrete, such as Portland cement, react with water to form calcium silicate hydrate (C-S-H) gel. This gel acts as the binding agent, holding the aggregate particles together and providing strength to the concrete structure.🛠️

It is important to note that the rate at which concrete gains strength can vary depending on various factors, such as the type and amount of cement used, water-cement ratio, temperature, and curing conditions. Proper mix design, precise water-cement ratio, and adequate curing techniques play a crucial role in maximizing concrete strength development.

In summary, the strength of concrete increases over time due to the hydration process, where cement reacts with water to form a solid and durable material. This gradual strengthening process is essential in ensuring the long-term durability and structural integrity of concrete constructions.

Reference www.jstor.org

Reference: https://www.jstor.org/stable/37464

Q. 13 which one is the most abundant of all the elements on earth?

(a) Silicon

(b) Aluminum

(c) Carbon

(d) **Oxygen**

Answer: (d)

Explanation: On earth, oxygen is the most common element, making up about 47% of the earth's mass. Silicon is second, making up 28%, followed by aluminum (8%), iron (5%), magnesium (2%), calcium (4%), sodium (3%), and potassium (3%).All of the remaining elements together make up less than 1% of the earth's mass.

Source: Fundamentals of physical geography, NCERT class XI

14. Which one of the following metals does not react with oxygen directly?

(a) Ti

(b) Fe

(c) Pt

(d) Zn

ANSWER: C

Explanation: Because of its inert nature it is placed at the bottom of the reactivity series. Hence it does not undergo oxidation even under high temperatures. Gold also has a similar property.

Refer reactivity series chapter 3 class 10 science ncert

Reference: Science X NCERT : PAGE NO. 43

Q.15. Consider the following observations about largest stupa at sanchi?

1. Going by information available from the inscriptions on the railings of the stupa, the construction of part of one of its gateways was financed by the Guild of Ivory workers.

2. In its original early form, this stupa was plain except for the stone railings and the gateways, which were richly carved.

3. The panels on the four gateways contain sculptures only in the front and have no sculptures on the rear side.

4. In 1918, when the stupa was discovered, all of its four gates were intact but the mound was in poor condition.

5. Art historians have established clear connections between the sculptures of the stupa with events described in Jataka Tales.

6. War scenes have also been depicted in these sculptures.

Which of the observations given above are correct?

(a) 1, 2, 3 and 4 only

(b) 2, 3, 4 and 5 only

(c) 3, 4, 5 and 6 only

(d) 1, 2, 5 and 6 only

Correct answer is D

Explanation:

Sanchi, about 50 km from Bhopal, the capital of Madhya Pradesh. is a world heritage site. Along with other relatively small stupas. there are three main stupas at Sanchi, Stupa-I is presumed to have the relics of the Buddha. Stupa-2, the relics of ten less famous arhats belonging to three different generations. Their names are found on the relie casket. Stupa-3 has the relies of Sariputta and Mahamougalayana.

Stupa-1. known for the carvings on its gateways is one of the finest examples of stupa architecture. Originally the stupa was a small brick structure which expanded over a period and was covered with stone, bedika and the torana (gateways). The Ashokan llon- capital pillar with an inscription is found on the southern side of the stupa, indicating how Sancht became a centre of monastic and artistic activities. The south gateway was made first followed by the others. The pradakshinapath around the stupa is covered with the vedika. There is also the upper pradakshinapath which is unique to this site. The four gateways are decorated profusely with sculptures. Buddha is shown symbolically as an empty throne, feet, chhatra, stupas, etc. Toranas are constructed in all four directions, Their stylistic differences indicate their possible chronology from the first century BCE onwards. Though Stupa-1 is the oldest stupa, the carving of images on the vedica of Stupa-2 are earlier than those on Stupa-1. Jatakas also become an important part of the narratives in stupas. The figures at Sanchi, despite being small in dimension, show considerable mastery of sculpting. Their physiognomic treatment of the body

shows both depth and dimension which are very naturalistic. There are guardian images on pillars and the shalbharika (i.e.. lady holding the branch of a tree) sculptures are remarkable in their treatment of volume. The rigidity of the earlier sculptures of Stupa 2 is no more there. Each torana consists of two vertical pillars and three horizontal bars on the top.

Statement 3 is not correct: Each horizontal bar is decorated with different sculptural themes on the front as well as at the back. Supporting the extensions of the lowermost horizontal bar from below are the images of shalbhanyikas

Statement 1 is correct: If we look at how Stupas were built, we find Inscriptions on the railings and pillars of stupas that record donations made for building and decorating them. Some donations were made by kings such as the Satavahanas; others were made by guilds, such as that of the ivory workers who financed part of one of the gateways at Sanchi.
Reference: HISTORY XI NCERT: Introduction to Indian Art : PAGE NO. 47.

Q.16. Which of the following pairs are correctly matched?

(Inscription/Event) : (Time Period)

1. Prayag Prashasti by Harisena : 4th century CE

2. Chinese traveller Fa Xian's Account: 6th century CE

3. Mudrarakshasa of Vishakhadatta : 5th century CE

4. Harshacharita of Banabhatta: 6th century CE

5. Aihole Prashasti of Ravikirti : 7^{th} Centuary CE

6. Kavirajamarga of Amoghavarsha: 8^{th} century CE

Select the correct answer using the code given below:

(a) 1, 2 and 3 only

(b) 2, 3 and 4 only

(c) 4, 5 and 6 only

(d) 1, 3 and 5 only

Answer is D

Explanation: A later inscription, also known as the Prayag Prashasti, is attributed to the 4th century CE Gupta emperor Samudragupta, and follows immediately below the edicts of Ashoka. Pair 1 is correct.

Faxian (c. 337 CE – c. 422 CE), also referred to as **Fa-Hien**, **Fa-hsien** and **Sehi**, was a Chinese Buddhist monk and translator who traveled by foot from China to India to acquire Buddhist texts. Pair 2 is not correct.

Mudrarakshasa was a historical play in Sanskrit written by Vishakhadatta. The time period of this text is somewhat between 4th to 8th century BC. Pair 3 is correct.

Bana, also called Banabhatta, (flourished 7th century), one of the greatest masters of Sanskrit prose, famed principally for his chronicle, Harshacharita (c. 640; "The Life of Harsha"), depicting the court and times of the Buddhist emperor Harsha (reigned c. 606–647) of northern India.

The Aihole Inscription, also known as the Aihole prashasti, is a nineteen line Sanskrit inscription at Meguti Jain temple in Aihole, Karnataka, India. An eulogy dated 634–635 CE, it was composed by the Jain poet Ravikirti in honor of his patron king Pulakesin Satyasraya (Pulakeshin II) of the Badami Chalukya dynasty. Pair 5 is correct.

Reference: HISTORY XII NCERT , THEME 1 AND THEME 2.

Q.17. Which one of the following statements is correct?

(a) Brahmi, used for writing many Ashokan inscriptions, shows local variations.

(b) The system of hieroglyphic writing was developed in ancient Mesopotamia.

(c) The system of cuneiform writing developed around 3rd millennium BCE in Egypt.

(d) An ancient script, Kharoshthi was widely used in the southern part of India.

Answer: A

Explanation:

Most of Ashoka's inscriptions were in Prakrit and were written in the Brahmi script shows local variations. Some of the inscriptions were also written in Kharosthi script.

Hieroglyphics is a writing system invented in Egypt around 5000 years ago. It is the second oldest form of writing, originating a few hundred years after cuneiform, which uses wedge-shaped characters and was devised by the Sumarians of Mesopotamia.

Kharosthi script

The Kharosthi script was an ancient Indian script used in Gandhara to write Gandhari Prakrit and Sanskrit.

It was used in Central Asia as well.

It is the sister script and contemporary of Brahmi.

It was written from right to left.

It was used in the Gandhara culture of North-Western India and is sometimes also called the Gandhari Script.

Q.18. Which one of the following activities was not a part of the daily time-table for a King as prescribed in Arthashastra?

(a) Receive reports on defense

(b) Visit the town incognito

(c) Receive revenue in cash

(d) Consult his Council of Ministers

Answer: C

Explanation:

King divides day into 8 parts for daily duties.

During the first part of the day, the king was to post watchmen and attend to the accounts of receipts and attendance at the audience hall and receiving the reports of his military. Second part, to look into the affairs of both citizens and country and inspection of the road and municipal works. The Third part for personal matters like bath meals etc.The fourth part, the king should look after the finance and selection of officers. The fifth part should be devoted to consultations with ministers, correspondence, secret matters, to receive secret information from spies etc. The sixth part, for self-deliberation. The seventh to supervise the army in person. The eighth, to consider various plans of military operations with his army chief.

The night was like wise divided into eight parts.

The first in receiving secret emissaries and the high officials or important persons. The second in bath and meal followed by religious meditations. The third, fourth and fifth portions are reserved for sleep and the king should be an early riser. The sixth part king being awakened recall the injunctions of science as well as his daily duties. The seventh part should deal with the spies and

secret agents.The eighth in receiving benedictions from priests, teachers and high priest and interviewing his physician, chief cook, astrologer and financial advisers.

Receiving revenue in cash is duty of officials and not the king.

Reference:

https://dharmorakshtirakshitah.wordpress.com/2018/02/05/chanakyas-time-table-for-kings-and-pointers-for-success/

19. Which organelle other than nucleus in eukaryotic cells has its own DNA, ribosomes, and proteins?

(a) Golgi

(b) Mitochondria

(c) Lysosomes

(d) Nucleosomes

ANSWER: B

Explanation: In eukaryotic cells Mitochondria are strange organelles that have the ability to make its own protein as it has both ribosomes and DNA of its own

The same characteristics in plant cells is present in Plastids

Refer Class 9 science NCERT chapter 5 page 65

20. For protein synthesis, the amino acids are recognized and carried by:

a) mRNA

b) snRNA

c) miRNA

d) tRNA

CORRECT ANSWER: D

Explanation: Transfer RNA(trna) is a small RNA molecule that plays a key role in protein synthesis. Transfer RNA serves as a link between the mRNA molecule and the growing chain of amino acids that make up a protein.

Reference: Class 11 NCERT Biology chapter 6 Molecular basis of inheritance.

21. In vertebrates, smooth endoplasmic reticulum in cells of which organ plays a crucial role in detoxification of toxic compounds?

a) Spleen

b) Intestine

c) Kidney

d) Liver

ANSWER: D

Explanation: SER in animal cells plays a crucial role in detoxification, this is done mainly in the Liver, apart from this the SER also has a role in membrane biogenesis and in manufacture of fat molecules.

Refer class 9 science NCERT chapter 5 page 64

22. The rate of an enzyme catalyzed reaction depends:

a) Upon substrate concentration, temperature, and pH.

b) Only on substrate concentration and pH, but not on temperature

c) Only on pH and temperature, but not on substrate concentration

d) Only on temperature, but not on pH and substrate concentration.

CORRECT ANSWER: A

Explanation: The rate of enzyme catalyzed reaction increases with increase in concentration of the enzyme. Also at low temperatures, an increase in temperature increases the rate of reaction. AT higher temperature the the protein is denatured and the rate of reaction dramatically decreases.

Reference: www.chem.libretexts.org

23. Both starch and glycogen are made up of glucose, however:

a) Starch is present in the liver and glycogen is present in red blood cells.

b) Glycogen is made in animal cells, but starch is made in plant cells.

c) Both starch and glycogen are present in animal and plant cells.

d) Both starch and glycogen are present in plant cells only

ANSWER: B

Explanation: The carbohydrates which are not used immediately are stored in the form of starch in plant cells which serves as internal energy reserves. A somewhat similar situation is seen in animals where the food is stored in the form of glycogen.

Refer Class 10 science ncert chapter 6 page 95

24. In some viral infections, the number of platelets are reduced quickly. Platelets are essential because:

a) They along with red blood cells carry oxygen

b) Platelets are important to carry food to cells through blood

c) Platelets remove carbon dioxide from blood

d) Platelets have a role in blood clotting.

ANSWER: D

Explanation: Leakage of blood would lead to loss of pressure which would reduce the efficiency of pumping system(heart) to avoid this the blood has platelet cells which circulate around the body and plug these leaks by helping to clot the blood at the points of injury.

Refer Class 10 science ncert chapter 6 page 108

Q.25 The focus of the second five year plan was:

(a) Establishment of a self-reliant and self- generating economy with emphasis on agriculture.

(b) Rapid industrialization with emphasis on the development of basic and heavy industries.

(c) Removal of property and attainment of self-reliance.

(d) Acceleration of food-grain production and increase in employment opportunities and overall productivity.

Answer: (b)

Explanation: To develop the Indian economy on socialist lines led to the policy of the state controlling the commanding heights of the economy, as the Second Five Year plan put it. This meant that the state would have complete control of those industries that were vital for the economy. The policies of the private sector would have to be complimentary to those of the public sector, with the public sector leading the way.

Source/Reference: NCERT: Indian Economic Development (pg-29)

Q.26 An Indian businessperson buys shares in a British car company. This transaction will be reflected in:

(a) Balance of trade, but not in balance of payments.

(b) Balance of payments, but not in balance of trade.

(c) Both balance of payments and balance of trade.

(d) Neither balance of payments nor balance of trade.

Answer: b

Explanation: The balance of payments (BoP) record the transactions in goods, services and assets between residents of a country with the rest of the world for a specified time period typically a year. There are two main accounts in the BoP – the current account and the capital account. The capital account records all international purchases and sales of assets such as money, stocks, bonds, etc.

Balance of trade records the volume of goods and services imported as well as exported by a country to other countries.

Source/Reference: NCERT: Introductory Macroeconomics (pg-77), Fundamentals of Human geography (pg-85)

Q.27 Which of the following are the high frequency indicators of the Indian economy?

1. Power Consumption

2. IIP general Index

3. 10-year G-sec yield

Select the correct answer using the code given below:

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

Answer: D

Explanation: High Frequency Indicators (HFIs) (New Addition)

Set 1- Monthly HFIs

(Power Consumption, E-way bills (Volume), GST, CPI, CPI Food, CPI Core, Rail Freight Traffic, Port Cargo Traffic)

Set 2- Monthly HFIs

(Domestic Air Traffic, UPI (Volume), IIP General Index, 8-Core Industries, Domestic Tractor Sales, Domestic Passenger Vehicles Sales, Two Three Vehicle Sales)

Set 3- Monthly HFIs (10 year G-Sec yield, 10 year AAA Corporate Bond yield, Average Crude Oil Price (Brent, Dubai, WTI), Indian Crude Oil Basket Price, Baltic Dry Index, Forex Reserves, Sensex, Nifty, Nifty VIX)

Set 4- Monthly HFIs

(Exchange Rate, Net purchase (+)/sale (-) of US dollar, Fuel Consumption, M3, Currency in Circulation, Merchandise Exports, Merchandise Imports)

Set 5- Monthly HFIs

(New EPF Subscribers, Members exited, Exited members who rejoined and resubscribed, Net payroll addition) .

Reference: Budget 2023.

Q.28 Suppose an Indian citizen makes an investment abroad and earns a positive return on her investment. Which of the following is correct?

(a) Her income is part of India's GDP but not part of India's national income

(b) Her income is part of India's national income but not part of India's GDP

(c) Her income is part of both India's GDP and national income

(d) Her income is neither part of India's GDP nor it's national income

Answer: (b)

Explanation: If we sum the gross value added of all the firms of the economy in a year, we get a measure of the value of aggregate amount of goods and services produced by the economy in a year. Thus GDP ≡ Sum total of gross value added of all the firms in the economy. GNP(Gross National Product) ≡ GDP + Net factor income from abroad. NNP ≡ GNP – Depreciation. NNP at factor cost ≡ National Income (NI)

Source/Reference: NCERT: Introductory macroeconomics (pg- 24)

Q.29 If Cash Reserve Ratio is lowered by the RBI, supply of money in the economy will:

(a) Remain unchanged

(b) Decrease

(c) Increase

(d) Have ambiguous impact.

Answer: (c)

Explanation: Cash Reserve Ratio (CRR) = Percentage of deposits which a bank must keep as cash reserves with the bank. Thus if CRR is lowered, than banks will have more money to lend. Thus the supply of money will increase in the economy.

Source/Reference: NCERT: Introductory Macroeconomics (pg- 40)

Q. 30 Which one of the following is the main cause of acid rains?

(a) The sun causes heating of upper layer of atmosphere.

(b) **The burning of fossil fuels releases oxides of carbon, nitrogen and Sulphur in the atmosphere.**

(c) The electrical charges are produced due to friction amongst clouds.

(d) The atmosphere of the earth contains acids.

Answer : (b)

Explanation: Acid rain is a byproduct of a variety of human activities that emit the oxides of Sulphur and nitrogen in the atmosphere. As mentioned earlier, burning of fossil fuels (which contain sulphur and nitrogenous matter) such as coal and oil in power stations and furnaces or petrol and diesel in motor engines produce sulphur dioxide and nitrogen oxides. SO2 and NO2 after oxidation and reaction with water are major contributors to acid rain, because polluted air usually contains particulate matter that catalyse the oxidation.

Source : NCERT CLASS XI ,CHAPTER 14 - ENVIRONMENTAL CHEMISTRY , Page no. 410

Q. 31 Biogas is considered to be an excellent fuel which burns without smoke. The main constituent of biogas is:

(a) **Methane**

(b) hydrogen

(c) carbon dioxide

(d) hydrogen sulphide

Answer : (a)

Explanation : Biogas is a mixture of gases (containing predominantly methane) produced by the microbial activity and which may be used as fuel. microbes produce different types of gaseous end-products during Growth and metabolism.

Source: NCERT , Class XII, Biology, Chapter 10

Q. 32 The depletion in atmospheric ozone layer in last century was due to:

(a) **chlorofluorocarbon**

(b) carbon monoxide

(c) methane

(d) pesticides

Answer: (a)

Explanation: The main reason of ozone layer depletion is believed to be the release of chlorofluorocarbon compounds (CFCs), also known as freons. These compounds are nonreactive, non flammable, non toxic organic molecules and therefore used in refrigerators, air conditioners, in the production of plastic foam and by the electronic industry for cleaning computer parts etc. Once CFCs are released in the atmosphere, they mix with the normal atmospheric gases and eventually reach the stratosphere. In stratosphere, they get broken down by powerful UV radiations, releasing chlorine free radical.

Source : NCERT Class IX ,Chapter 14 and Class XI Environmental chemistry.

33. Which one of the following holds true for a freely falling object?

a) It moves with a uniform velocity.

b) It moves with a uniform speed.

c) It moves with a non-uniform acceleration.

d) It moves with uniform acceleration.

ANSWER: D

Explanation: Whenever an object falls under the influence of gravity. The acceleration is caused by gravity only and hence it remains constant throughout the fall. Its value is 9.8m/sec-2

Reference: Class 9 Science ncert page chapter 10 134

34. A sound wave of frequency of 2 kHz has a wavelength of 35 cm in a given medium. How long will it take to travel a distance of 2.1 km through the medium?

a) 30 s

b) 2.1 s

c) 3.0 s

d) 4.1 s

Answer: c

Explanations: Convert frequency into Hz= $2x10^3$

Wavelength into m= 0.35cm

Distance into m = $2x10^3$m

Speed=distance/time

Which is also equal to frequency x wavelength

Therefore Time=distance/frequency x wavelength

I.e $2x10^3/2x10^3$ X 0.35

= 2.1/0.7 = 3 sec

Reference; Class 9 NCERT chapter 12 page 166

35. Which one of the following conservation laws is a consequence of Newton's third law of motion?

a) Conservation of energy

b) Conservation of momentum

c) Conservation of charge

d) Conservation of mass

ANSWER: B

Explanation: Newton's 3rd law states every action has an equal and opposite reaction. Hence the total momentum is conserved. The change of momentum happens in Newton's 2nd law. That is F=ma.

Reference: Class 9 science ncert chapter 9 page 122

Q. 36 which one of the following is a permeable rock that allows water to pass through it?

(a) Granite

(b) **Limestone**

(c) Quartzite

(d) Sill

Answer: (b)

Explanation: Permeable or pervious rocks are those which allow water to pass through them easily. Examples are Limestone and sandstone.

Source: NCERT, Class XI, Fundamentals of physical geography, Page no. 65

Q. 37 which one of the following is the deepest, inland and protected port on the east coast of India?

(a) Chennai

(b) Paradip

(c) Tuticorin

(d) **Vishakhapatnam**

Answer : (d)

Explanation: Vishakhapatnam is the deepest landlocked and well-protected port. This port was, originally, conceived as an outlet for iron ore exports.

Source : NCERT, Class X , geography Chapter 7 , Page no 78

Q. 38 the greatest diversity of animal and plants species is found in:

(a) Temperate forests

(b) Deserts and Savannas

(c) Arctic and Alpine systems

(d) **Tropical moist forests**

Answer : (d)

Explanation: The tropical rainforest or moist forests biome has four main characteristics: very high annual rainfall, high average temperatures, nutrient-poor soil, and high levels of biodiversity (species richness). The word "rainforest" implies that these are the some of the world's wettest ecosystems. Rainforests generally receive very high rainfall each year, although the exact amount varies among different years and different rainforests.

Source: Shankar Ias , Chapter 3, Page no 22 , 4th edition

Q.39 which one among the following statements about drumlins is correct ?

(a) It is a streamlined hill moulded in glacial drift on the till plains.

(b) It is a city located in central Europe.

(c) It is a river.

(d) It is a narrow road in Tibet.

Answer: (a)

Explanation: Drumlins are smooth oval shaped ridge-like Features composed mainly of glacial till with Some masses of gravel and sand. The long axes of drumlins are parallel to the direction of ice Movement.

Source: NCERT, Class XI, page no . 69, Chapter 7

Q.40 which one of the following is the busiest sea route and links to industrially developed regions of the world?

(a) Mediterranean – Indian Ocean sea route

(b) **Northern Atlantic sea route**

(c) Cape of good hope sea route

(d) The north Pacific sea route

Answer : (b)

Explanation: one fourth of the the worlds foreign trade moves on North Atlantic sea route. it is therefore the busiest in the world and called the big trunk route.

Source : NCERT, Human geography Class XII ,Page no . 72-73

Q.41 using the code given below identify the type of farming on the basis of given characteristics:

1. Produce is consumed entirely or mainly by the family who work the land or tend the livestock

2. If small surplus is produced, it may be sold or bartered.

3. It is generally small scale and labour intensive with little or no technological input.

Code :

(a) Extensive farming

(b) Intensive farming

(c) Subsistence farming

(d) Commercial farming

Answer : (c)

Explanation: Subsistence Farming is a form of agriculture where almost all the produce goes to feed and support the household. It is a type of agriculture in which a farmer produces crops and rears animals to fulfil the needs or requirements of his family and not for the market. This farming is found in less developed and developing countries, mainly in tropical regions. A striking feature of farming is its scattered distribution; small patches of tilled land are surrounded and separated by broad stretches of forest.

Source: NCERT Class X, geography, Page no. 34

42) Car A takes1 hour more than car, which at a speed of 60 km per hour, to cover some fixed distance. If car A had doubled its speed, it could cover the distance in1hour less time than car B travelling at 60 km per hour. What is the original speed of car A in km per hour?

a) 30

(b) 40

(c) 45

(d) 50

Answer: c

Explanations:

We have given ,

Distance / speed of A – Distance / speed of B = 1

Distance / speed of B - Distance / 2 × speed of A = 1

Thus Add this two equations.

Distance / speed of A - Distance / 2 × speed of A = 2

Distance / speed of A = 4

Thus put value in equation 1

Distance / speed of B = 3

Distance = 180

Thus , Speed of A = 180 / 4 = 45.

43. Suppose A, B and C are three taps fixed to the bottom of a tank with draining Capacity 1:2:3.When all three of them are on, it takes 1hour to drain out the full tank. If A and C are on but B is off, then how much time, in minutes, will it take to empty out a full tank of water?

(a) 75

(b) 90

(c) 105

(d) 120

Answer: b

Explanations:

A will drain in 1/6

B will drain in 1/3

C will drain in 1/2

A and C will drain in

1/6 + 1/2

= (2+6)/(12)

=8/12

=2/3

Reversing it

3/2= 1 and half hour.

I.e. 90 minutes

Short method:

A, B and C are three taps fixed to the bottom of a tank with draining capacity 1:2:3.

That means total capacity is 6.

When it is 6 they required 60 minutes. If B is off , capacity would be 4.

Menas 6 × 60 = 4 × ?

? = 90 minutes

44) Assume that the Earth is a spherical ball of radius x km with a smooth surface so that one can travel along any direction. If you have travelled from point P on the Earth's surface along the East direction a distance of pi-X km, which direction do you have to travel to return to P so that the distance required to travel is minimum?

(a) East only

(b) West only

(c) East or West but not any other direction

(d) Any fixed direction

Answer: D

Explanations:

Radius is x km.

Circumference or total distance we have to travel for completing one round is 2 × 22/7 × x km

If you have travelled from point P on the Earth's surface along the East direction a distance of 22/7 x km. That means half of the round is covered.

If you travel in any fixed direction after that then in same time you will reach at P because this is a sphere.

45) If x and y are two-digit prime numbers such that y is obtained from x by interchanging its digits and x-y=36, then what is the value of xy?

(a) 1611

(b) 2701

(c) 4831

(d) 5603

Answer: b

Let x= 10a+b

y= 10b+a

x-y= 36

(10a+b)-(10b+a)= 36

9a-9b=36

a-b=4

So difference between a and b should be 4

a	b	x	y
5	1	51	15

6	2	62	26
7	3	73	37
8	4	84	48
9	5	95	59

Only 73 and 37 combination is possible else number are not prime

So 73x 37= 2701

46) Sixty- four cubes of sides 2 cm each are combined to form a cube of side 8cm.If four of the smaller cubes along the diagonal of a surface are removed from the surface of the large cube, which one of the following statements about the surface area of this solid object is true ?

(a) It is equal to the surface area of the large cube.

(b) It is less than the surface area of the large cube.

(c) It is more than the surface area of the large cube.

(d) Insufficient data.

Answer: A

Explanation: Since, there are 3 faces which are visible in a diagonal cube. When the cube of a diagonal is removed then the 3 faces of other cubes will be visible from outside. So, there will not be any change in the surface area of this solid figure.

47. Which of the following statements about Organization for Security and in Europe (OSCE) are correct?

I. There are total 57 states from Europe, Central Asia and America.

2. It offers a forum for political negotiations and decision- making in the field of early warning, conflict prevention, crisis management and post- conflict rehabilitation.

3. OSCE has the primary responsibility of providing military security in the European Region.

4. The decisions of OSCE are legally binding

Select the correct answer using code given below:

(a) 1 and 2 only

(b) 1, 2 and 3 only

(c) 1, 2, 3 and 4

(d) 3 and 4 only

Answer: B

Explanations:

With 57 participating States in North America, Europe and Asia, the OSCE – the Organization for Security and Co-operation in Europe – is the world's largest regional security organization.

The OSCE works for stability, peace and democracy for more than a billion people, through political dialogue about shared values and through practical work that aims to make a lasting difference.

Decisions are taken by consensus on a politically, but not legally binding basis.

The OSCE primary responsibility is enhancing border management and security while facilitating legitimate travel and commerce, protecting human rights and promoting human contacts. The OSCE works in conflict prevention and resolution, facilitating settlements of conflicts and promoting peacebuilding and post-conflict rehabilitation.

Reference: https://www.osce.org/

48. Which of the following statements about Quad is/are correct?

1. It is group of five countries, namely, India, Australia, USA and France.

2. Maritime cooperation is an important binding force among members of the Quad.

3. The Quad members formed a working group on COVID-19 vaccines.

Select the correct answer using code given below:

(a) 1 only

(b) 1and 2 only

(c) 2 and 3 only

(d) 1,2 and 3

Answer: C

CURRENT TIT-BITS Initiative by OneClass.in (MISSIONCAPFHUB)

- **India's Ministry of Defence** is the **world's biggest employer** with 2.92 million people, which **includes combined active service personnel, reservists and civilian staff**, followed by US Department of Defense according to a report in 'Statista'- a Germany-based private organization. According to **Stockholm International Peace Research Institute (SIPRI),** the five largest spenders in 2021 were the **United States, China, India, the United Kingdom and Russia**, together accounting for 62 per cent of expenditure.
- **Malabar 'Quad' naval exercise**: **Quad Member (US, Japan, Australia and India)** will conduct the Malabar exercise off **Yokosuka in Japan**. It will witness India deploying its multi-role stealth frigate **INS Shivalik**, anti-submarine corvette **INS Kamorta** and the long-range maritime patrol aircraft **P-8I.**

Reference: Oct 22 Current Tit-Bits Magazine

49. The National Human Rights Commission was established under the statute of:

(a) The Protection of Human Rights Act, 1993

(b) The Protection and Implementation of Human Rights Act, 1993

(c) The Human Rights Act, 1993

(d) The Human Rights Commission Act, 1993

Answer: A

Explanation – The National Human Rights Commission is a statutory (and not a Constitutional) body. It was established in 1993 under a legislation enacted by the Parliament, namely, the Protection of Human Rights Act, 1993. The commission is the watchdog of human rights in the country, that is, the rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International covenants and enforceable by courts in India.

Source – Laxmikant Chapter – NHRC

50. Which of the following are not an official language(s) of the United Nations?

1. Arabic

2. German

3, Spanish

4. Chinese

Select the correct answer using code given below:

(a) 1 and 3 only

(b) 1 and 4 only

(c) 1 and 2 only

(d) 2 only

Answer: D

CURRENT TIT-BITS Initiative by MISSION CAPF HUB

- **European** ... fight climate ... development of ... automakers ... The mandate would amount ... gasoline or diesel.
- ... buying semi-automatic ... the sale of ammunition ...
- **Ecu**... Council as ... will replace **India, Ireland, Kenya, Mexico and Norway.**
- In a significant initiative, **the United Nations General Assembly (UNGA)** has adopted an **India-sponsored resolution on multilingualism** that mentions the **Hindi language for the first time**. The resolution passed encourages the UN to continue disseminating important communications and messages in **official as well as in non-official languages**, including in **Hindi language**. The resolution also mentions **Bangla and Urdu** for the first time. **Arabic, Chinese, English, French, Russian and Spanish** are the six official languages of the United Nations, **English and French** being the working languages of the United Nations Secretariat.

Reference: June 22 Current Tit-Bits Magazine

51. The method used in separating a mixture of two miscible liquids having sufficient difference in their boiling points is:

a) Filtration
b) Solvent Extaction
c) Centrifugation
d) Simple Distillation
ANSWER: D

Explanation: Distillation is the method used for separating two miscible liquids. The condition for distillation is that the differences in their boiling point should not be more than 25k. Usually petroleum based liquids are separated by this method.

Reference: Class 9 Science ncert chapter 2 page 22

52. Which one of the following statements is correct?

a) Alloys are mixtures
b) Alloys are compounds
c) Alloys are always made up of metals.
d) All alloys contain carbon as one of their components.

ANSWER: A

Explanation: Alloys are mixtures of a metal and a non metal or two different metals. It shows the properties of its constituents and is difficult to separate by physical methods.Bronze, Brass , Nichrome are a few examples of alloys.
Reference: Class 9 Science ncert chapter 2 page 15

53. The common element in graphite, fullerene, diamond and graphene is:

a) Oxygen
b) Nitrogen
c) Hydrogen
d) Carbon

ANSWER: D

Explanation: All the given substances contain carbon as a common element. These are different allotropes of carbon. They all have different physical properties but same chemical properties.

Diamond has a 3d structure

Graphene has a hexagonal array structure

Fullerene is shaped like a geodesic dome

Reference: Class 10 science ncert chapter 4 Page 61

54. The gas generated on reacting zinc with dilute sulphuric acid is:

a) Argon
b) Helium
c) Hydrogen
d) Nitrogen

ANSWER: C
Explanation: Acid + Metal = Salt + Hydrogen gas

Refer class 10 ncert page chapter 2 page 20

55. An aqueous solution of a salt is known as brine. The salt is:

a) Sodium chloride
b) Potassium chloride
c) Calcium chloride
d) Sodium nitrate
ANSWER: A

Explanation: When electricity is passed through an aqueous solution of sodium chloride called brine it decomposes to form sodium hydroxide the process is called chlor alkali process because of the products formed. Chlorine is given at anode and hydrogen gas at cathode.

Refer class 10 ncert chapter 2 page 30

Q.56. Which one of the following commissions was not associated with public services in India?

(a) Aitchison Commission

(b) Islington Commission

(c) Lee Commission

(d) Radhakrishnan Commission

Correct answer is D

Explanation: Radha Krishna Commission was established to investigate the situation of Indian university education and make recommendations for improvements. Dr. Sarvepalli Radhakrishnan was named Chairman of the Commission on University Education. After India attained independence on August 15, 1947, the University Education Commission requested Dr. Radhakrishnan to serve as its chair.

All other commissions are related to public services.

Reference: https://old.amu.ac.in/emp/studym/100003932.pdf and spectrum.

Q.57. Who among the following was known as Lokhitwadi'?

(a) Keshav Chandra Sen

(b) Gopal Hari Deshmukh

(c) M.G. Ranade

(d) Gopal Ganesh Agarkar

Correct answer is B

Explanation: Gopal Hari Deshmukh was a social reformer from Maharashtra popularly known as Lokhitwadi. It was the pen name he wrote under for the weekly known as Prabhakar. In the weekly we wrote many article that called for the end to caste discrimination, dowry system, child marriage etc.

Reference: Spectrum modern India , PAGE NO. 261

Q.58. Match List I with List II and select the correct answer using the code given below

List I	**List II**
(Harappan Sites)	**(Location)**
A. Nageshwar	1. Uttar Pradesh
B. Alamgirpur	2. Rajasthan
C. Kalibangan	3. Saurashtra
D. Rakhigarhi	4. Haryana

Code :

	A	B	C	D
(a)	**3**	**1**	**2**	**4**
(b)	4	2	1	3
(c)	4	1	2	3
(d)	3	2	1	4

Correct answer is A

Explanation:

Kalibangan – Rajshtan

Alamgirpur – Uttar Pradesh

Nageshwar – Saurashtra

Rakhigarhi - Haryana

Reference: History XII NCERT : THEME 2 , PAGE NO. 2

Q.59. Which one of the following pairs of books and their authors is not correctly matched?

(a) Bandi Jiwan : Sachindranath Sanyal

(b) The Philosophy of the Bomb : Bhagwati Charan Vohra

(c) Indian Unrest : Annie Besant

(d) Desher Katha : Sakharam Ganesh Deuskar

Answer: C

Explanation:

Bandi Jeevan was written by Sachindra Nath Sanyal. Sachindra Nath Sanyal was an Indian revolutionary. Sanyal was one of the founders of the Hindustan Republican Association.

Written by Bhagwati Charan Vohra in early January 1930, 'The Philosophy of the Bomb' was a polemical intervention into debates among nationalist circles about the role of violence in the anticolonial movement in India.

Sakharam Ganesh Deuskar (1869-1912) a close associate of Sri Aurobindo. He was a Marathi Brahmin who had settled in Bengal. He published a book entitled Desher Katha describing in exhaustive detail the British commercial and industrial exploitation of India.

Indian Unrest by Valentine Chirol

Reference : Sprectrum.

Q.60. Which of the following is/are important markers for the archaeologists to identify an archaeological site as a 'center of craft production'?

1. Evidence of raw materials such as stone nodules, whole shells, etc.

2. Geographical expanse of the site

3. Evidence of unfinished objects, rejects and waste material

4. Evidence of variety of pottery.

Select the correct answer using the code given below:

(a) 1 only

(b) 1 and 3 only

(c) 2 and 4 only

(d) 3 only

Answer: B

Explanation: In order to identify centres of craft production, archaeologists usually look for the following: raw material such as stone nodules, whole shells, copper ore; tools; unfinished objects; rejects and waste material. In fact, waste is one of the best indicators of craft work. For instance, if shell or stone is cut to make objects, then pieces of these materials will be discarded as waste at the place of production.

Reference : HISTORY XII NCERT: THEME 1 , page no. 11

61. In humans, urea is mainly formed from the metabolism of which one of the following components of food?

a) Fatty acids

b) Vitamins
c) Amino acids
d) Glucose
ANSWER: C
Explanation: Urea is a by nitrogenous waste formed as a by product of metabolism of proteins. This process takes place in the liver.

REFERENCE

Class 11 Biology chapter 19 Excretory products and their elimination

62. The lymph is mainly formed from the plasma of blood, and it surrounds the cells. The main difference between the blood and lymph is:

a) Lymph does not contain red blood cells.
b) Lymph does not contain white blood cells.
c) Lymph contains both red blood cells and white blood cells.
d) Lymph does not contain any cells.

ANSWER: A
Lymph contains a variety of substances , including proteins , salts, glucose, fats, water and white blood cells. The lymph does not normally contain any red blood cells.

Reference: Class 11 Biology chapter 18 Body fluids and circulation.

63. For the digestion of carbohydrate, protein, and fat enzymes such as amylase, trypsin and lipase are required. It is secreted into the duodenum though:

a) Bile
b) Plasma
c) Lymph
d) Pancreatic juice
ANSWER: D

Explanation: The pancreas secrete pancreatic juice which contains enzymes like trypsin for digesting proteins and lipase for breaking down emulsified fats.

Reference: Class 10 Science ncert chapter 6 page 100

64. Lactic acid is formed in the muscle during exercise or running. It is formed:

a) to give extra energy from fat
b) to give extra oxygen from lungs

c) to give extra energy from glucose
d) to give extra energy from vitamins.

CORRECT ANSWER: C

Explanation: sometimes when there is a lack of oxygen in our cells another pathway for the breakdown of pyruvate is taken, here the pyruvate is converted into lactic acid which is also a three carbon molecule, this buildup of lactic acid in our muscles during sudden activity causes cramps.

Reference: Class 10 science ncert chapter 6 page 102

Q.65 Fiscal deficit in the union budget means:

(a) The difference between current expenditure and current revenue.

(b) Net increase in the borrowings of the Union government from the RBI

(c) The sum of the budgetary deficits and the net increase in internal and external borrowings.

(d) None of the above

Answer: (c)

Explanation: Fiscal deficit is the difference between the government's total expenditure and its total receipts excluding borrowing.

Gross fiscal deficit = Total expenditure – (Revenue receipts + Non-debt creating capital receipts)

Gross fiscal deficit = Net borrowing at home + Borrowing from RBI + Borrowing from abroad.

Budgetary deficits must be financed by either taxation, borrowing or printing money.
Governments have mostly relied on borrowing, giving rise to what is called government debt

Source/Reference: NCERT: Introductory Macroeconomics (pg-78)

Q.66 Which one of the following is the largest component of revenue expenditure in the union budget 2022-23?

(a) Interest payments

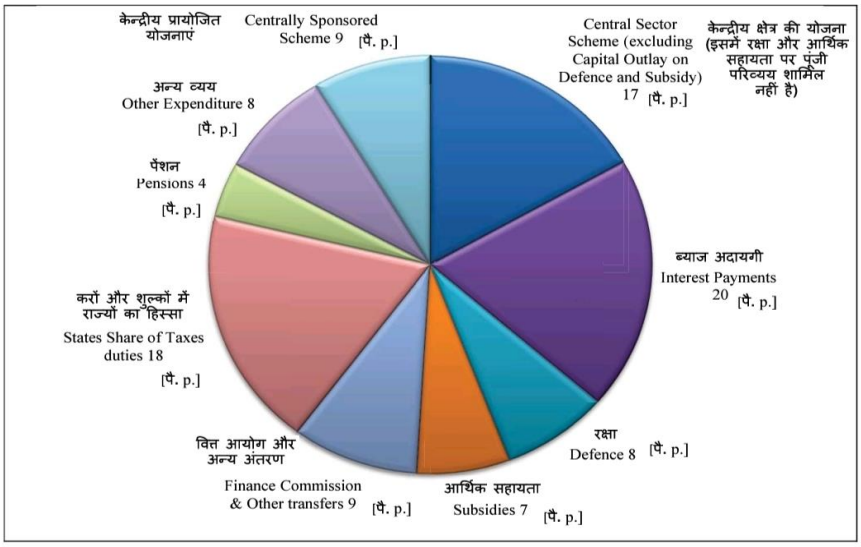
(b) Defense expenditure

(c) Expenditure on healthcare

(d) Subsidies

Answer: (a)

Explanation: Rupee goes to Budget 2022-23:



Source/Reference: Union Budget 2022-23 document.

Q.67 Adequacy of foreign exchange reserves of a country is captured by which of the following indicators?

1. Reserves to import ratio
2. Reserves to external debt ratio
3. Reserves to GDP ratio
4. Reserves to monetary aggregates

Select the correct answer using the code below

(a) 1 and 3 only

(b) 1, 2, 3 and 4

(c) 2, 3 and 4 only

(d) 1, 2 and 4 only

Answer: D

Foreign exchange is used to pay for the imports and external debts. So adequacy of foreign exchange reserves is dependent on both imports as well as external debt. Also as foreign exchange reserves held against a portion of monetary base can increase confidence in domestic currency. Increased money stock is expected in an import-dependent economy to translate to increased imports which would drain the reserves. An unstable demand for money may indicate greater probability of capital flight (outgo of forex). So adequacy of foreign reserve also depend on broad money (monetary aggregates). Hence option D is correct

Q.68 If all the people of the economy increase the proportion of income they save, the total value of the savings in the economy will either decrease or remain unchanged. This phenomena is known as:

(a) Crowding out

(b) Crowding in

(c) Paradox of thrift

(d) Paradox of prosperity

Answer: (c)

Explanation: If all the people of the economy increase the proportion of income they save (i.e. if the mps of the economy increases) the total value of savings in the economy will not increase – it will either decline or remain unchanged. This result is known as the Paradox of Thrift – which states that as people become more thrifty they end up saving less or same as before.

Source/Reference: NCERT: Introductory Macroeconomics (pg-63)

Q.69 The banks are required to maintain a certain ration between their cash in hand and total assets. This ratio is known as:

(a) Cash reserve Ratio (CRR)

(b) Statutory Liquidity ratio (SLR)

(c) Central Bank ratio (CBR)

(d) Statutory Bank ratio (SBR)

Answer: (b)

Explanation: Statutory Liquidity Ratio (SLR) The fraction of their total demand and time deposits which the commercial banks are required by RBI to invest in specified liquid assets.

Source/Reference: NCERT: Introductory Macroeconomics (pg- 104)

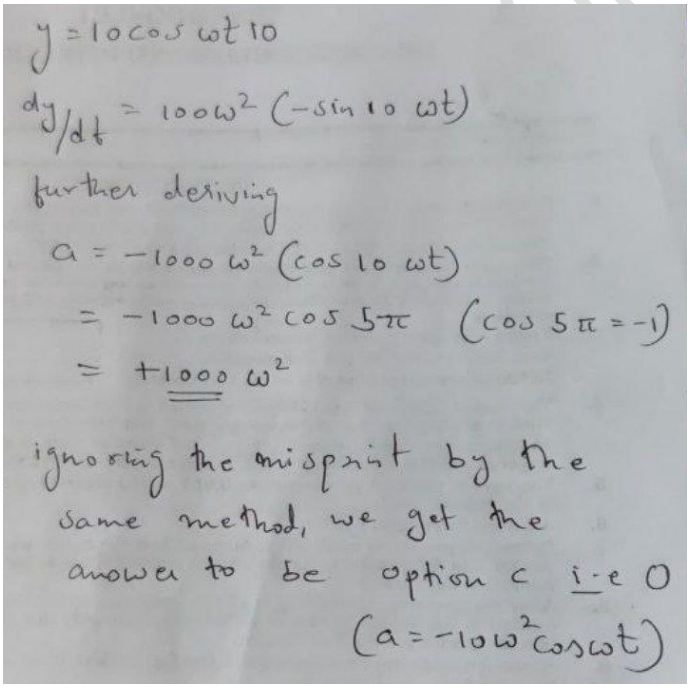
70. A simple harmonic motion of a particle is represented as, y=10 cos ω t 10. The acceleration of the particle at time t= π/2 ω will be: (symbols here carry their usual meanings)

a) 10 ω
b) -10 ω^2
c) 0
d) 10/ ω

Answer: C

Explanation: It is misprinted by UPSC. If we take the face values, the answer will come 1000 omega ². Which is not in option.

Then we can say (if the misprint value is ignored) then by the same method the correct answer is 0



Reference: NCERT class 11 physics chapter 13 oscillations

71. A wire of resistance R is cut into four equal parts. These parts are then connected in parallel. If the equivalent resistance of this combination is R', then the ratio R'/R is:

a) 1/16
b) 1/4
c) 4
d) 16

ANSWER: A

Explanation: Resistance is directly proportional to the length of the material, hence if the length is reduced by 4 times. The resistance also becomes R/4.

Further if these are connected in parallel, it would mean

1/4+1/4+1/4+1/4 = 1/16

Therefore the total resistance would reduce by 16 times than original.

Reference: Class 10 science ncert chapter 12 page no 207

72. In experiment #1, a bar magnet is moved towards a conducting wire loop axially, with the magnet's North Pole facing the loop. In experiment #2, the same process as in experiment #1 is repeated except that the south pole of the magnet faces the loop. Which one of the following statements is true in this context?

a) The direction of current in the loop will be of opposite nature in both the experiments.
b) The direction of current in the loop will be in the same in both the experiments.
c) No current will flow in either of the two experiments.
d) More current will flow in the loop in experiment #1.
CORRECT ANSWER: A

According to the Fleming's left hand rule keeping the thumb the fore finger and middle finger in mutually perpendicular direction the first finger points in the direction of magnetic field second finger in the direction of current then the thumb will point in the direction of motion acting on the conductor.

Reference: Class 10 science ncert chapter 13 page 231

Q.73 which one of the following correctly explains the change in seasons on Earth?

a. tilt of the earth's axis

b. rotation of earth on its own axis

(c) Revolution of the moon around the sun

(d) Interaction of the earth with other planets

Answer (a)

Explanation: Earth's tilted axis causes the seasons. Throughout the year, different parts of Earth receive the Sun's most direct rays. So, when the North Pole tilts toward the Sun, it's summer in the Northern Hemisphere. And when the South Pole tilts toward the Sun, it's winter in the Northern Hemisphere.

Source: G.C. Leong, , Page no. 5

Q. 74 Consider the following statements:

1. The great northern plains are formed by basins of three distinct river systems - the Indus, the Ganga , and the Brahmaputra
2. They are one of the most densely populated areas on Earth.
3. Between the Yamuna at Delhi and the Bay of Bengal, nearly 1600 km away, there is a drop of only 200 metres in elevation.

Which of the statement given above are correct?

(a) 1,2 and 3
(b) 2 and 3 only
(c) 1 and 2 only
(d) 1 and 3 only

Answer : (a)

Explanation: The northern plain is one of the largest and most fertile plain of India. It is one of the World's most intensively farmed areas.They are located between the Himalayan rivers in the north and the Peninsular Plateau in the south.Due to its suitable farming properties, it is highly populated.The land is generally flattish.The northern plains have the Indus river system in the west and the Ganga Brahmaputra river system in the east.

Source: NCERT Class XI, India physical environment

Q. 75 consider the following statement

1. Many of the world's largest mountain chains exist beneath the sea.

2. Some mountain chains are revealed as island arcs.

3. The mid-oceanic ridges form the longest mountain chains.

4. The mid-Atlantic ridge rises 33 meters above the floor of the Atlantic.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 3 and 4 only
(c) 1, 2 and 4 only
(d) 1, 2 and 3 only

Answer: (d)

Explanation: Mid oceanic ridge forms an interconnected chain of Mountain system within the ocean. It is the Longest mountain-chain on the surface of the Earth though submerged under the oceanic Waters. It is characterised by a central rift System at the crest, a fractionated plateau and Flank zone all along its length. The rift system At the crest is the zone of intense volcanic Activity.

The MAR is about 3 km in height above the ocean floor and 1000 to 1500 km wide, has numerous transform faults and an axial rift valley along its length. The ridge was discovered in the 1950s. Its discovery led to the theory of seafloor spreading and general acceptance of Wegener's theory of continental drift.

Source: NCERT , Class XI, Fundamentals of physical geography.Page no. 32

Q. 76 Match List – I and and List II and select the current answer using the code given below the lists:

List- I.		List II
A.	Prairies.	1. Eurasia
B.	Steppes.	2. South Africa
C.	Pampas.	3. North America
D.	Veld	4. South America Code:

	A.	B.	C.	D
(a).	2.	1.	4.	3

(b). 2. 4. 1. 3

(c). 3. 1. 4. 2

(d). 3. 4. 1. 2

Answer: (c)

Explanation:

Argentina- Pampas America- Prairie

South Africa- Veld Asia- Steppe

Australia- Down

Source : NCERT , Class VII , Social science, chapter 9

Q. 77 consider the following statements about millets:

1. Millets are often referred to as climate resilient crops because they can grow on arid lands with minimal inputs and maintenance.

2. Millets are a good source of mineral dietary fiber, antioxidants, and protein.

3. Millets, including sorghum, account for less than 3% of the global grain trade.

Which of the statements given above are correct?

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

Answer: (d)

Explanation: Millets are drought-resistant, require less water and can grow in poor soil conditions. This makes them a suitable food crop for areas with unpredictable weather patterns and water scarcity.

Source: https://www.fao.org/millets-2023/about/en

Directions: The next three items are based on 'a survey on occurrence of vowels in a certain book irrespective of whether they are in upper or lower case.

Vowel	A	E	I	O	U
Percentage	20	45	15	8	12

78) For how many pairs of vowels is the chance of occurrence of any one of the two more than 34% in the book?

(a) 4

(b) 5

(c) 6

(d) 7

Answer: b

A + E= 20 + 45= 65

A+ I = 20+ 15= 35

A+ O= 20+8= 28

A + U= 20 + 12= 32

E+I= 60

E+ O= 53

E+ U= 57

I+O= 23

I+ U= 27
O+ U= 20

79) Among the three vowels which occur minimum number of times, what is the of occurrence of the letter that occurs the maximum of times among them?

(a) 42 6/7 %

(b) 41 5/7 %

(c) 40 4/7 %

(d) 39 2/7 %

Answer: a

Vowel occurs minimum times O, U, I

Among these three I occur maximum time

Occurrence of O, U, I=35

And I= 15

Percentage= (15/35) x 100

= 42 6/7 %

80) If "O" and “U”, irrespective of upper or lower case, occur exactly 5040 times, then how many times does the letter "E" occur in the book in the upper or the lower case?

(a) 11840

(b) 11600

(c) 11430

(d) 11340

Answer: d

O and U occur 8% and 12 % respectively. Collectively they appear at 20 % of total (T)

So 20% of T= 5040

T= 25200

Occur of E= 45% of 25200= 11340

81) Suppose a, b and c are three distinct natural numbers such that a + b + c = abc. Consider the following statements:

1. The arithmetic mean of a, b and c is a natural number.

2. The harmonic mean of a, b and c lies between 1 and 2.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both I and 2

(d) Neither 1 nor 2

Answer: c

Let a=1, b=2 and c= 3

a+b+c= abc

1+2+3=1x2x3

Arithmetic mean

$$\bar{x} = \frac{x_1 + x_2 + x_3 \dots \dots \dots x_n}{n}$$

= (1+2+3)/ 3

= 2(natural number)

Harmonic means

HM = n / $[(1/x_1)+(1/x_2)+(1/x_3)+\dots+(1/x_n)]$

= 3/[(1/1)+(1/2)+(1/3)]

= (3x6)/ 11

=1.63 (between 1 and 2)

82) How many three-digit numbers are possible such that the difference between the original number and the number obtained by reversing the digits is 396? (No digit is repeated)

(a) 4

(b) 5

(c) 50

(d) 40

Answer: D

Let 3 digit number be abc

i.e. 100a+10b+c……1

Interchanging

100c+10b+a……2

Eq.1 - eq.2

(100a+10b+c)- (100c+10b+a)= 396

99a-99c= 396

a-c= 4

a	c
5	1
6	2
7	3
8	4
9	5

So 5 numbers will be possible.

Also , b can take 10 different values from 0 to 9.

So total numbers are 50.

But repetitions are not allowed.

Therefore numbers (551 , 511 , 662 , 622 , 773 , 733 , 884 , 844 , 995 , 955) would not be possible .

That's why , only 40 numbers are possible. Hence option D is correct.

Q.83 Which of the following statements is/are correct?

1. Population ageing is the process by which the share of the older population becomes proportionately lesser.

2. In most of the developed countries, the population in higher age groups has increased.

Select the correct answer using the code given below :

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Answer: (b)

Explanation: Population ageing is the process by which the share of the older population becomes proportionally larger. This is a new phenomenon of the twentieth century. In most of the developed countries of the world, population in higher age groups has increased due to increased life expectancy. With a reduction in birth rates, the proportion of children in the population has declined

Source/Reference: NCERT Fundamentals of Human geography pg- 19

84. Which of the following statements is/are correct about 'Action for climate Empowerment (ACE)?

1. It is a term adopted by the UN Framework Convention on Climate change.

2. This term is related to the Paris Agreement.

Select the correct answer using the code given below:

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor

Answer: c

Explanations: Action for Climate Empowerment (ACE) is a term adopted by the United Nations Framework Convention on Climate Change (UNFCCC) to denote work under Article 6 of the Convention (1992) and Article 12 of the Paris Agreement.

The over-arching goal of ACE is to empower all members of society to engage in climate action, through the six ACE elements - climate change education and public awareness, training, public participation, public access to information, and international cooperation on these issues.

Reference: https://unfccc.int/ace

85. What is 'Climate Neutral Now' initiative?

1. It encourage organizations and other interested stakeholders to act now in order to achieve a carbon neutral world by 2030.

2. It derives its aims from the Paris Agreement.

Select the correct answer using the code given below:

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Answer: B

Explanations: The Climate Neutral Now Initiative is one of several initiatives launched by the UNFCCC secretariat to increase climate action by engaging non-Party stakeholders.

The Climate Neutral Now Initiative encourages and supports organizations to act now in order to achieve a climate neutral world by 2050, as enshrined in the Paris Agreement. It is a tool to promote additional voluntary action on climate and to provide recognition for it. The initiative is not a certification scheme for its participants.

Reference: https://unfccc.int/climate-neutral-now

86. Which of the following statements are correct about KAVACH-2023?

1. It is a joint coordination committee of all three wings of India's armed forces to protect India's borders.

2. It is India's national level hackathon jointly launched by AICTE and BPRD to tackle cyber threats.

Select the correct answer using the code given below:

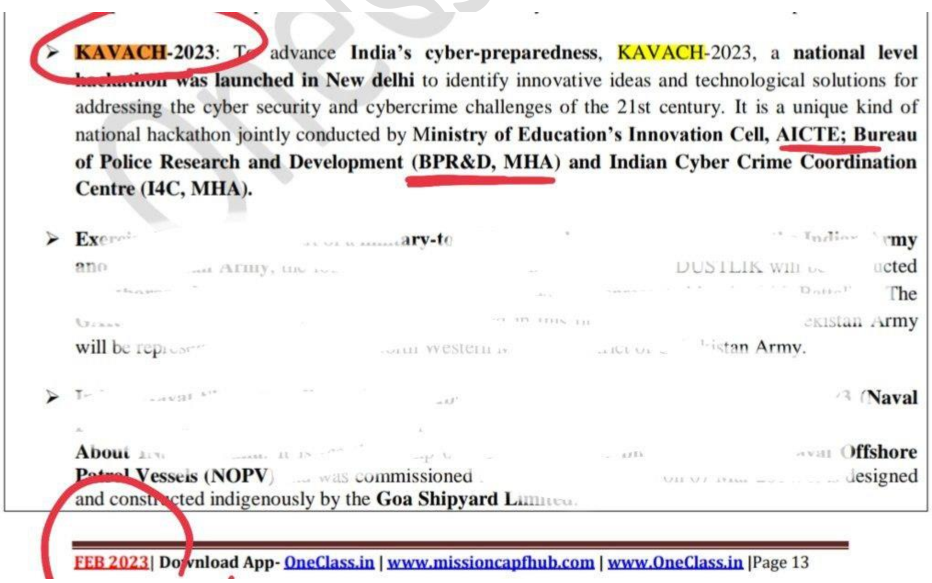
(a) 1 only

(b) 2 only

(c) Both1 and2

(d) Neither1nor 2

Answer: b



➤ **KAVACH-2023**: To advance **India's cyber-preparedness**, KAVACH-2023, a **national level hackathon was launched in New delhi** to identify innovative ideas and technological solutions for addressing the cyber security and cybercrime challenges of the 21st century. It is a unique kind of national hackathon jointly conducted by **Ministry of Education's Innovation Cell, AICTE; Bureau of Police Research and Development (BPR&D, MHA) and Indian Cyber Crime Coordination Centre (I4C, MHA).**

➤ **Exer** ... **ary-to** ... **my** ... DUSTLIK will ... ucted ... The ... Army will be ... stan Army.

➤ ... **Naval** ... **About** ... **Offshore Patrol Vessels (NOPV)** ... was commissioned ... designed and constructed indigenously by the **Goa Shipyard Limited**.

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Reference: February 2023 Current Tit-Bits Magazine by OneClass.in (Missioncapfhub)

Q.87. Which one among the following statements with reference to the 'Neolithic Period' not correct?

(a) The characteristic features of the period included ground and polished stone tools, agriculture, animal domestication and pottery.

(b) This period is also known as the 'New Stone Age'.

(c) The characteristic features appeared almost at the same time in various parts of the subcontinent.

(d) Earliest evidence of agriculture is found from Mehrgarh around 8000 BCE.

Correct answer is D

Explanation: The earliest settlement at Mehrgarh—located in the northeast corner of the 495-acre (2.00 km^2) site—was a small farming village dated between 7000 BCE and 5500 BCE.

Reference: https://en.wikipedia.org/wiki/Mehrgarh

Q.88. Which one of the following is not a pottery type?

(a) OCP

(b) CCE

(c) NBP

(d) BRW

Correct answer is B

Explanation:

OCP : Early Vedic period

OCP : Early Vedic period . The Ochre Coloured Pottery culture is a Bronze Age culture of the Indo-Gangetic Plain "generally dated 2000–1500 BCE.

The Black and Red Ware culture (BRW) is a late bronze age culture.

The Northern Black Polished Ware culture (abbreviated NBPW or NBP) is an urban Iron Age Indian culture of the Indian Subcontinent, lasting c. 700–200 BCE.

Reference: https://en.m.wikipedia.org/wiki/Pottery_in_the_Indian_subcontinent

Q.89. Which one of the following political centers finds a mention in Ashokan inscriptions?

(a) Indraprastha

(b) Kaushambi

(c) Suvarnagiri

(d) Kandahar

Correct answer is C

Explanation: There were five major political centres in the empire – the capital Pataliputra and the provincial centres of Taxila, Ujjayini, Tosali and Suvarnagiri, all mentioned in Asokan inscriptions. If we examine the content of these inscriptions, we find virtually the same message engraved everywhere – from the present-day North West Frontier Provinces of Pakistan, to Andhra Pradesh, Orissa and Uttarakhand in India.

Reference : History Theme 1 : Page no 32

Q.90. Which one of the following statements with reference to the ancient Indian coins is not correct?

(a) The Indo-Greeks issued the first coins bearing the name and images of rulers.

(b) The Kushanas issued the first gold coins.

(c) The Kushana gold coins were different in weight from the coins issued by contemporary Roman emperors.

(d) These Kushana gold coins have been found from several sites in north India and central Asia.

Correct answer is C

Explanation: The **standard-metal,** weight, and denomination of the coins, as well as mint characteristics such as **typology, iconographic components,** and the historical significance of the coins, are all noteworthy qualities of the Kushana coins.

Reference: https://en.wikipedia.org/wiki/Kushan_coinage

Q.91. Consider the following statements about the practice of Vedic sacrifices:

1. The shrauta (Vedic sacrifices) involved the use of three fires the garhapatya (householder's fire), ahavaniya (offeratorial fire) and dakshinagni (southern fire).

2. These fires were supposed to be placed in pits of different shapes, i.e., the garhapatya to be square, ahavaniya to be round and that of the dakshinagni, rectangle-shaped.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Correct answer is A

Explanation:

Statement 1 is correct: For Somyaga big and open place is necessary where the vedi and the three kundas of fires should be placed. The three fires are the garhapatya (householder's fire), ahavaniya (offeratorial fire) and dakshinagni (southern fire) fire.
The ahavaniya and dakshina fire are kindled from the garhapatya fire.

Statement 2 is not correct: Gārhapatya is the Agni who is made first. (The other ones are lighted from this) The meaning of Gārhapatya is "Of the lord of House". He is established by the process of Agnyādhānam, ("establishment of fire") which is traditionally a tedious process where two complimentary *araṇi* pieces are rubbed together and its friction would create the fire. This is the Agni that is said to be ritually pure (*medhya*) and thus prescribed for Brahmanic yajñas. Obviously the person who establishes the Gārhapatya must be married, as the śrautāgnis are for the householders. While the *araṇis* are being rubbed, the Sāmavedic *udgātṛ* priest sings the sāmans. The rite and its associated ceremonies is lengthy to describe, (it spans almost over two days) so that is how Gārhapatya is lighted. The Agni is celebrated and is given birth to, lauded and placed in the round pit designated.

From the Gārhapatya, the Agni is taken to a square pit at a fixed distance east, which is the place of Āhavanīya. Āhavanīya is lighted by the Yajurvedic *Adhvaryu* from the Gārhapatya. Extinguishing of Āhavanīya is another offence. Āhavanīya is the Agni in whom the higher śrauta sacrifices are performed, to honour the Devas.

The Dakṣiṇāgni is the third Agni, to the South of the Gārhapatya. He can be made himself through rubbing of *araṇis* or lighting from Gārhapatya by the *Agnīdhra*. He is there to ward off the evils and to represent the destructive force of Agni.

Reference: https://www.quora.com/What-are-Garhapatya-Dakshinagni-and-Ahavaniya

Q. 92 trans-Siberian railway from St. Petersburg to Vladivostok does not run across:

(a) Altai range

(b) **Caucasus mountains**

(c) Ural mountains

(d) Ob and yenisei rivers

Answer (b)

Explanation: Trans Siberian Railway is the world's first double-tracked and electrified transcontinental railway.It was built between 1891 and 1916 to connect Moscow and Vladivostok in the Far East.It travels via Perm, Yekaterinburg, Omsk, Novosibirsk, Krasnoyarsk, Irkutsk, Chita, and Khabarovsk along the way.The Trans-Siberian runs through the Urals, across the magnificent and limitless steppe, and along the shore of the world's largest freshwater lake.

Source : 1)NCERT , Class XII, Fundamentals of Human Geography, Chapter – Transport and communication 2) Atlas

Q. 93 Consider the following statements about Barchans.

1. These landforms are found in Thar Desert in India.
2. The windward side has concave slope with maximum height at the center.
3. Two ends of the barchan are called horns.

Codes:

(a) 1 and 2 only

(b) 2 and 3 only

(c) **1 and 3 only**

(d) 3 only

Answer : (c)

Explanation: Barchans are sand dunes in the shape of a crescent. When the wind flows dominantly in one single direction, it leads to the formation of one such barchan. Among the many types of dunes, barchans are the most commonly occurring dunes, and although it is common to find barchans in India, they can be spotted in desert areas all across the globe.Think of barchans as a convex that faces the wind. Usually, the horns of the crescent can be seen pointing downwind, which also marks the advancing wind in the lateral direction. These dunes may appear asymmetrical in shape like a cross-section and have a gentle slope that faces the wind.

Hence, statement 2 is incorrect

Source : NCERT , Class XI , Fundamentals of physical geography , Chapter – 7

Q. 94 Consider the following statements:

1. Geothermal energy can be used to produce electricity or its hot water can be used directly for industry agriculture bathing and cleaning.

2. Nuclear energy is often cheaper than some other sources of electricity.

3. Thermal power station burn fossil fuels to create steam to drive the turbines. Which of the statements given above are correct?

(a) 1 only

(b) **1,2 and 3**

(c) 1 and 3 only

(d) 2 and 3 only

Answer : (b)

Explanation: Geothermal energy is the heat from the earth. This heat is used for bathing, to heat buildings, and to generate electricity. Nuclear power is cost competitive with other forms of electricity generation, except where there is direct access to low-cost fossil fuels. The term thermal power plant is used because fuel is burnt to produce heat energy that is in turn converted into electrical energy.

Q.95 Match list I with list II and select correct answer using the code given below :

List I	List II
A. Stockholm convention.	1. Hazardous chemicals and pesticides in international trade
B. Minimata convention.	2. Persistent organic pollutants
C. Basel convention.	3. Binding instrument on mercury
D. Rotterdam convention	4. Trans-boundary movement of hazardous wastes

Codes:

	A.	B.	C.	D
(a)	1.	4.	3.	2
(b)	1.	3.	4.	2
(c)	2.	4.	3.	1
(d)	**2.**	**3.**	**4.**	**1**

Answer: (d)

Explanation: Stockholm Convention is a global treaty to protect human health and the environment from POPs (Persistent Organic Pollutants).

Basel convention was adopted in 1989 by the Conference of Plenipotentiaries in Basel, Switzerland, the "Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal", generally known as the Basel Convention, came into force in 1992.

The Minamata Convention on Mercury is an important international treaty intended to protect health and the environment from the adverse effects of mercury.

Rotterdam Convention on Prior Informed Consent Procedures (PIC) entered into force in 2004.

Source : Shankar IAS book, Internet

96) The Judgment of the Supreme Court in Peoples' Union for Civil Liberties v. Union of India 2004 is related to which of the following?

(a) Right to Shelter

(b) Right against Custodial violence

(c) Right to Information

(d) Right to Speedy trial

Answer: – C

Explanation – Right of information is a fundamental right under Article 19(1)(a) of the Constitution. The State under Clause (2) of Article 19 of the Constitution, however, is entitled to impose reasonable restrictions inter alia in the interest of the State. Source- https://indiankanoon.org/doc/31276692/

97. Which among the following deals with Habeas Corpus?

(a) State of Uttar Pradesh v. Raj Narain and Ors. (1975)

(b) Additional District Magistrate, Jabalpur v. Shivakant Shukla (1976)

(c) Mrs. Maneka Gandhi v. Union of India (1978)

(d) Nandini Satpathy v. P.L.Dani(1978)

Answer: B

Explanation – ADM Jabalpur v. Shivkant Shukla was a landmark judgement of the Supreme Court of India pertaining to the suspension of Articles 21 and 226 of the Indian Constitution in the event of a National Emergency. This controversial judgment of P.N. Bhagwati, decreed during the emergency from 25 June 1975 to 21 March 1977, held that a person's right to not be unlawfully detained (i.e. habeas corpus) can be suspended in the interest of the State. This judgment received a lot of criticism since it reduced the importance attached to Fundamental Rights under the Indian Constitution. Going against the previous decisions of High Courts, the bench which included P. N. Bhagwati concluded by a majority 4:1 in favour of the then Indira Gandhi government while only Justice Hans Raj Khanna was opposed to it.

Source –https://indiankanoon.org/doc/1735815

98. Which among the following statements regarding the powers of the High Courts under Article 226 of the Constitution of India is not?

(a) It can issue writs of habeas corpus, mandamus, quo warranto, certiorari, and prohibition.

(b) Writs can be issued to enforce any rights conferred by Part-III and for any other purpose.

(c) This power can derogate the power conferred on the Supreme Court under Article 32(2).

(d) Writ can be issued to any authority under its jurisdiction

Answer: C

Explanation – Article 226 of the Constitution empowers a high court to issue writs including habeas corpus, mandamus, certiorari, prohibition and quo warranto for the enforcement of the fundamental rights of the citizens and for any other purpose. Article 226 – Power of High Courts to issue certain writs.

The power conferred on a High Court by this article shall not be in derogation of the power conferred on the Supreme Court by clause (2) of article 32. Source – Laxmikant chapter – high court and https://www.constitutionofindia.net/articles/article-226-power-of-high-courts-to-issue-certain-writs/

99. Which among the following is not correct?

(a) Legislation on criminal law, barring exceptions, is a subject under the Concurrent List.

(b) Bankruptcy and Insolvency are subjects under the Concurrent List.

(c) Inter-State trade and commerce is a subject under the State List.

(d) Banking is exclusively under the Union List.

Answer: C

Explanation – Interstate trade and commerce is a subject under union list of constitution. Source – https://www.mea.gov.in/Images/pdf1/S7.pdf

100. 'Basel Convention', 'Rotterdam Convention' and 'Stockholm Convention' relate to which of the following?

(a) Human Rights of Prisoners

(b) Management of Pollutants

(c) Conservation of Wetlands

(d) Conservation of Rivers

Answer: (b)

Explanation: Stockholm Convention is a global treaty to protect human health and the environment from POPs (Persistent Organic Pollutants).

Basel convention was adopted in 1989 by the Conference of Plenipotentiaries in Basel, Switzerland, the "Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal", generally known as the Basel Convention, came into force in 1992.

The Minamata Convention on Mercury is an important international treaty intended to protect health and the environment from the adverse effects of mercury.

Rotterdam Convention on Prior Informed Consent Procedures (PIC) entered into force in 2004.

Source : Shankar IAS book, Internet

101. Which of the following is/are not correct about the Mother's Absolute Affection Programme?

1. Allows all pregnant women to absolutely free and no-expense delivery in public health institutions.

2. Provides assured, comprehensive and quality antenatal care.

3. Promotes undiluted focus on breastfeeding

4. Provides medical and nutritional care to severely acute malnourished children.

Select the correct answer using the code given below:

(a) 1, 2 and 3 only

(b) 2 and 3 only

(c) 1, 2 and 4 only

(d) 3 only

Answer: C

Explanation: MAA - "Mother's Absolute Affection" is a nationwide programme of the Ministry of Health and Family Welfare in an attempt to bring undiluted focus on promotion of breastfeeding and provision of counselling services for supporting breastfeeding through health systems. The programme has been named 'MAA' to signify the support a lactating mother requires from family members and at health facilities to breastfeed successfully.

Source: https://pib.gov.in/newsite/PrintRelease.aspx?relid=148531

102. Which of the following statements about the Right to Information Act, 2005is/are correct ?

1. There shall be not more than twelve (12) Information Commissioners.

2. The Chief Information Commissioner shall hold office once for a term of five years.

3. The Chief Information Commissioner is eligible for reappointment.

Select the correct answer using the code given below :

(a) 1 only

(b) 2 only

(c) 1 and 2 only

(d) 1, 2 and 3

Answer: - B

Explanation – The commission consists of a chief information commissioner and not more than 10 information commissioners. The information commissioner and chief information commissioner hold office for a term of 5 years or until they attain the age of 65 years. They are not eligible for reappointment.

Source- laxmikant

103. Who among the following was the first pro-tem Speaker to be unanimously elected as the Speaker of the Lok Sabha?

(a) Rabi Ray

(b) Hiren Mukherjee

(c) Somnath Chatterjee

(d) P.A. Sangma

Answer: - c

Explanation – Somnath Chatterjee was unanimously elected pro tem speaker of 14th lok sabha .

Source- https://www.tribuneindia.com/2004/20040605/main5.htm

Q.104. Consider the following statements with reference to Jainism:

1. Vardhamana Mahavira attained Kaivalyajnana outside the town of Jrimbhikagrama, on the banks of river Rijupalika and in the field of a householder named Samaga.

2. The state when the Karma particles actually begin to flow towards the Jiva to bind it is known as Asrava.

Which of the statements given above is/ correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Correct answer is C

Explanation:

Statement 1 is correct: Vardhamana Mahavira gained kevalajnana (infinite knowledge, omniscience) on a field owned by a landowner by the name of Samaga, outside the village of Jrimbhikagrama, on the banks of the Rijupalika river.

Statement 2 is correct:

ASRAV Asrav means inflow and according to Jain philosophy defined as the inflow of karmas to the soul. The influx of karmas occurs at every second in life. It is this process that keeps our souls wandering in this universe and prevents it from being free.

Reference:

https://dontbignorant.in/15-interesting-facts-about-mahavira/

https://en.wikipedia.org/wiki/Asrava

Q.105. Consider the following pairs with reference to textiles in southern India:

	(Tax)	**(Meaning)**
1.	Panjupeeli	1. On cotton yarn
2.	Nulayam	2. On cotton thread
3.	Tari Kadamai	3. On Silk Clothes

4. Sella 4. On silk thread

Which of the above pairs is / are correct?

a. 1 only

b. 1 and 2 only

c. 2, 3 and 4 only

d. 1, 2 , 3 and 4

Answer: B

Explanations:

The Cholas actively encouraged the weaving industry in their kingdom and derived revenue from it. Inscriptions mention taxes such as the tari irai or tari kadamai (loom tax). Other dues included achchu tari (probably a tax on the pat- terned loom), tari pudavai (probably a tax on cloth), panjupeeli (a tax on cotton yarn), parutti kadamai (a tax on cotton), nulayam (a tax on cotton thread), and kaibanna or bannige (a tax on dyers). A tax called pattadai nulayam was levied on silk thread. On the other hand, there is evidence of the state announcing tax con- cessions and tax remissions for a specified period to weavers in new settlements in order to attract them. Kulottunga I was given the title Sungam tavirta Cholan (remover of customs duties). This alludes to his having abolished customs dues at ports in order to promote trade.

Q.106. Which one of the following animals does not come under the category of four noble animals (Maha-Ajaneya Pasu) carved on the round drum (Anda-Phalaka) of the lion capital at Sarnath?

(a) Deer

(b) Lion

(c) Bull

(d) Horse

Correct answer is A

Explanation:

The state emblem is an adaptation from the Sarnath Lion Capital of Ashoka.

In the original, there are four **lions**, standing back to back, mounted on an **abacus** with a frieze carrying sculptures in high relief of an **elephant**, a galloping **horse**, a **bull** and a lion separated by intervening wheels over a bell-shaped lotus.

Carved out of a single block of polished sandstone, the Capital is crowned by the Wheel of the Law (Dharma Chakra).

Reference: History Theme 1 : Page no 32

Q.107. The ruler Vindhyashakti during the period preceding the Gupta Age is associated with Which one of the following dynasties?

(a) Vakatakas

(b) Chalukyas

(c) Kalachuris

(d) Sungas

Correct answer is A

Explanation: Little is known about Vindhyashakti (c. 250 – c. 270 CE), the founder of the family Vakataka. Territorial expansion began in the reign of his son Pravarasena I. It is generally believed that the Vakataka dynasty was divided into four branches after Pravarasena I.

Reference: https://en.wikipedia.org/wiki/Vakataka_dynasty

Q.108. The ancient Indian medical treatise for horses called Ashvashastra is attributed to which one of the following persons ?

(a) Vagbhatta of the seventh century

(b) The sage Shalihotra

(c) Bhartrihari of the seventh century

(d) Varahamihira of the sixth century

Correct answer is B

Explanation:

Shalihotra is considered an ancient authority on horses and horse breeding and number of works like Hayayurveda, Salihotrasamihita, Ashvaprasna and Ashvalakshnashastra are attributed to him.

Ashvalakshnashastra tells people what are the signs to look for and how to choose the best horse. The owner of a horse with "chakra" (ring) on the back predicts his becoming a king.

His treatise "Shalihotra Shastra" gives history of horse rearing and horse trading in India, lists breeds of horses and various veterniary medicines and practices.

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Reference: https://www.hindustantimes.com/india/vet-science-dates-back-to-ancient-india/story-2UE7WXnnEeTOx7jnBTWwoN.html

Q.109. The celebrated group of poets in medieval Mathura and Vrindavana called the Ashta-Chhapa were the successors of which one of the following medieval Bhakti Saints?

(a) Kabir of Banaras

(b) Chaitanya of Bengal

(c) Guru Nanak of Bengal

(d) Surdas of Bras region

Correct answer is D

Explanation: Aṣṭchāp, (Sanskrit: Eight Seals), group of 16th-century Hindi poets, four of whom were disciples of the Vaishnava leader Vallabha, and four of his son and successor, Viṭṭhala. The greatest of the group was Sūrdās, a blind singer whose descriptions of the exploits of the child-god Krishna are the highlights of his collection of poetry called the *Sūrsāgar*, a work that is admired throughout the Hindi-speaking areas of northern India. It is particularly rich in its details of daily life and in its sensitive perception of human emotion, the parent's for the child and the maiden's for her lover. Other members of the Aṣṭchāp group were Paramānanddās, Nanddās, Kṛṣṇadās, Govindswāmī, Kumbhandās, Chitaswāmī, and Caturbhujdās.

Reference : https://www.britannica.com/topic/Astchap

Q. 110 consider the following statements about laterite soils found in India

1. Lateral soil is found in high altitudes of Himalaya.

2. It is a very fertile soil.

3. It is a red color soil due to presence of iron oxide.

4. It is poor in nitrogen, potash, and organic matter.

Which of the statements given above are correct?

(a) **3 only**

(b) 2 and 4 only

(c) 3 and 4 only

(d) 1, 3 and 4 only

Answer: A

Explanation:

Laterite Soil

Laterite has been derived from the Latin word 'Later' which means brick. The laterite soils develop in areas with high temperature and high rainfall. These are the result of intense leaching due to tropical rains. With rain, lime and silica are leached away, and soils rich in iron oxide and aluminium compound are left behind. Humus content of the soil is removed fast by bacteria that thrives well in high temperature. These soils are poor in organic matter, nitrogen, phosphate and calcium, while iron oxide and potash are in excess. Potash is in excess. Statement 4 is not correct.

Hence, laterites are not suitable for cultivation; however, application of manures and fertilisers are required for making the soils fertile for cultivation.

Red laterite soils in Tamil Nadu, Andhra Pradesh and Kerala are more suitable for tree crops like cashewnut.

Laterite soils are widely cut as bricks for use in house construction. These soils have mainly developed in the higher areas of the Peninsular plateau. The laterite soils are commonly found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh and the hilly areas of Odisha and Assam.

Reference : Geography XI NCERT : FUNDAMENTAL OF INDIAN ENVIRONMENT : PAGE NO. 71

Q. 111 Which of the following statements about Ragi Crop grown in India is correct?

(a) It is a millet crop grown in drier parts of South India.

(b). It is a Rabi crop sown between November and March.

(c). It is a rain-fed crop grown on red light, black and sandy loam soil.

(d). It is grown between 20°C and 30°C of temperature and 50-100 cm rainfall.

Answer : A

'Ragi' also known as Finger Millet, is a robust, popular food and marvellous grain crop in India. It is called dry land crops, mostly cultivated by the people of Andhra Pradesh, Karnataka and Tamil Nadu & Kerala, both tropical and sub-tropic regions.

Q. 112 Consider the following statements about rock structures.

1. Conglomerates are clastic sedimentary rocks.
2. Slate is a non-clastic sedimentary rock.
3. Granite is plutonic igneous rock.
4. Basalt is an extrusive igneous rock.

Which of the statements given above are correct?

(a) 1 , 2 and 3 only

(b) 3 and 4 only

(c) 1 and 2 only

(d) **1, 3 and 4 only**

Answer : (d)

Explanation: Slate is a fine-grained, foliated, homogeneous, metamorphic rock. Hence, statement 2 is incorrect. All other statements are correct.

Source : G.C. Leong, Chapter 2 – Earth's Crust

Q. 113 Consider the following statements about Ramsar sites in India :

1.Gahirmatha is the habitat of Olive Ridley turtles.

2.Chilka lake is the habitat of Irrawaddy Dolphin as it's flagship species

3.Nalsarovar wetland is also the habitat of Indian wild ass (Khur)

4.Tso Moriri is the habitat and breeding ground of black necked crane.

Which of the following statements are correct:

a. 1 and 3 only

b. 1 , 3 and 4 only

c. 2 and 4 only

d. 1, 2, 3 and 4

Answer: (d)

Explanation: Gahirmatha marine sanctuary is very famous for its nesting beach for Olive Ridley Turtles. It is the one of world's most important nesting beach for turtles.

Chilka, the world's second-largest brackish water lagoon and Asia's largest, is the single largest habitat of Irrawaddy dolphins in the world.

Nalsarovar wetland hosts a few mammalian species including the endangered wild ass and the black buck.

Tso Moriri Lake is a high-altitude freshwater lake situated in the Ladakh region of India.It is an important breeding ground for several bird species, such as the bar-headed goose, black-necked crane, and brown-headed gull, among others.

Source: google

Q. 114 Which of the following soil formation process takes place in Phumdis floating fields in Loktak Lake of Manipur?

(a) Laterization

(b) Podzolization

(c) Gleization

(d) Calcification

Answer: (b)

Explanation: The soil formation process that takes place in the Phumdis (floating islands) of Loktak Lake in Manipur is primarily **peat accumulation**. Peat forms as dead plant material accumulates in waterlogged conditions and undergoes partial decomposition due to the waterlogged environment. Over time, this accumulation of organic material leads to the formation of peat soil.

Q. 115 Which of the following statements is correct about spring tides?

A. High tide is higher than average high tide and low tide is higher than average low tide.

B. High tide is lower than average high tide and low tide is higher than average low tide.

C. **High tide is higher than average high tide and low tide is lower than average low tide.**

D. High tide is lower than average high tide and low tide is lower than average low tide.

Answer : (c)

Explanation: When the difference between high and low tides is the highest, they are called spring tides. Spring tides can be witnessed after the full moon and new moon. They take place when the sun, moon, and earth are all in a line. It happens because the solar tides and lunar tides line up together to reinforce one another, leading to a bigger total tide.

Source : NCERT , Fundamentals of physical geography, Class XI, Chapter- Movements of ocean water, Page no. 122

116. Consider the following statements about IPL cricket tournament:

1. Two teams won the tournament five times each.

2. Chennai Super Kings remained runner-up in five editions of the tournament.

3. On three occasions, the final was played abroad.

Which of the statements given-above is/are correct?

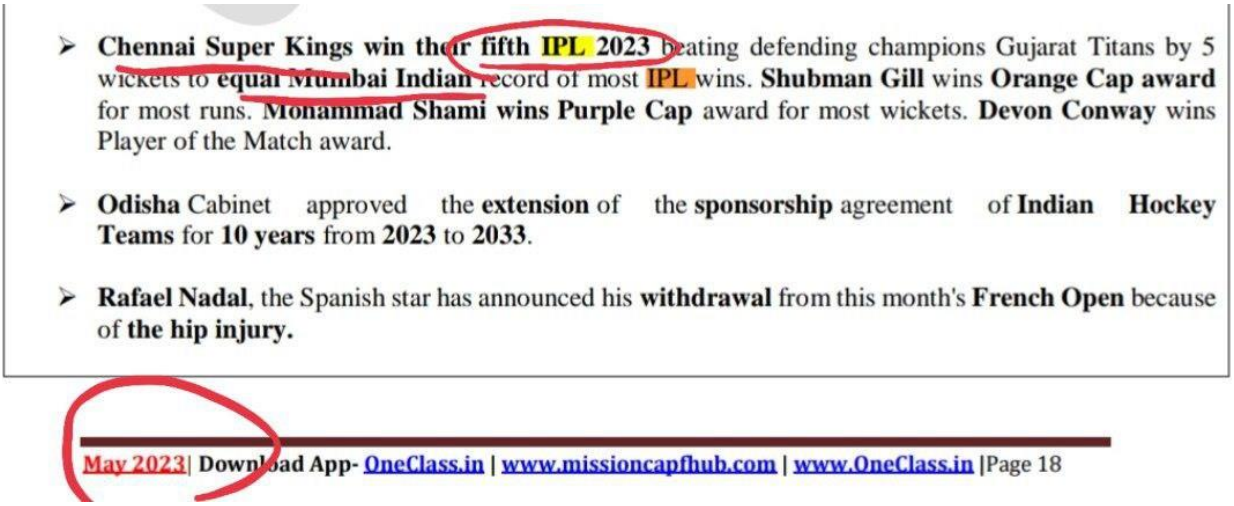
(a) 1, 2 and 3

(b) 2 and 3 only

(c) 1 and 2 only

(d) 3only

Answer: A



- **Chennai Super Kings win their fifth IPL 2023** beating defending champions Gujarat Titans by 5 wickets to **equal Mumbai Indian** record of most IPL wins. **Shubman Gill** wins **Orange Cap award** for most runs. **Mohammad Shami wins Purple Cap** award for most wickets. **Devon Conway** wins Player of the Match award.
- **Odisha** Cabinet approved the **extension** of the **sponsorship** agreement of **Indian Hockey Teams** for **10 years** from **2023** to **2033**.
- **Rafael Nadal**, the Spanish star has announced his **withdrawal** from this month's **French Open** because of **the hip injury.**

Reference: May 23 Current Tit-Bits Magazine

117. Consider the following statements about Khelo India University Games (KIUG)

1. The first edition of KIUG wag held in Odisha.

2. The name of the mascot of the third edition of KIUG was Jeetu.

3. The first edition of KIUG was postponed due to COVID.

Which of the statements given above is/are correct ?

(a) 1, 2 and 3

(b). 2 and 3 only

(c) 1 and 2 only

(d) 3 only

Answer: C

CURRENT TIT-BITS Initiative by OneClass.in (MISSIONCAPFHUB)

SPORTS

- Olympic champion **Neeraj Chopra** became the **world number one for the first time** in his career in the latest **men's javelin throw rankings** issued by the **World Athletics** ahead of Grenada's Anderson Peters.
- **World Chess Champion**: **Ding Liren** was crowned as the **World Chess Champion** (i.e. **king of World chess**) after beating Russia's Ian Nepomniachtchi. He became **the first Chinese person** to ever win the **World Chess Open Championship**.
- **ISSF World Cup Shotgun**: The seasoned **Mairaj Ahmad Khan** and youngster **Ganemat Sekhon**, combined effectively to give India their **first medal, a Gold** in the ongoing **ISSF World Cup Shotgun** in **Cairo, Egypt**. The Indian mixed doubles pair defeated **Luis Raul Gallardo Oliveros and Gabriela Rodriguez** 6-0 in the final of the **Skeet Mixed Team event**.
- **Malaysia Masters 2023, Kuala Lumpur**: Ace Indian shuttler **HS Prannoy** beat China's **Weng Hong Yang** to **clinched his** first-ever **BWF World Tour title**.
- **The 3rd Khelo India University Games (KIUG) 2022, Lucknow, UP**: Union Minister for Youth Affairs & Sports **Anurag Singh Thakur** and Chief Minister of Uttar Pradesh Yogi Adityanath launched the official **Logo, Mascot** of KIUG 2022. Union Minister Anurag Thakur released the **anthem** of the Games titled **'Khelo India - Har Dil Mein Desh'** composed and sung by renowned singer **Palash Sen**. The **mascot** of the University Games, **Jitu Bajasingha**, an exotic live **state animal** and a **symbol** of **'Pride of Pride'**, was unveiled on the occasion. **'Shakti'**, the **official torch of Khelo India University Games** is not only a symbol of its heritage and spirit but also a living entity that is full of energy. The opening ceremony is scheduled for May 25 at the Babu **Banarasi Das University in Lucknow**.

CURRENT TIT-BITS Initiative by MISSION CAPF HUB

- **2nd Khelo India University Games 2021 (KIUG 2021):** The Governor of Karnataka, Shri TC Gehlot, Union Minister of Youth Affairs and Sports Shri Anurag Singh Thakur launched the **logo, jersey, mascot and anthem of the Khelo India University Games 2021 (KIUG 2021)** at the **Sree Kanteerava Stadium in Bengaluru.**
  1. The mascot- An elephant, named Veera.
  2. The logo- It features the iconic Vidhana Soudha building – the Legislative House in Bengaluru – with two elephants on either side.
  3. The anthem- sung by **Chandan Shetty and Nikhil Joshi.**
  4. New Sports- For the first time it introduces **Yogasana and Mallakhamb** in the competition category, among 20 sporting disciplines.
  5. Hosting University and state- Jain University, Karnataka will host University of KIUG.
  6. A Khelo India App for live updates on the Games was also launched by **Karnataka**, the host state on the occasion.
  7. The first Khelo India University Games was held in 2020 at the Kalinga Institute of Industrial Technology (KIIT), Odisha.

Reference: May 23 Current Tit-Bits Magazine

118. Exercise Ajeya Warrior is a biennial training event between the Indian Army and the army of:

(a) Nepal

(b) United Kingdom

(c) Russia

(d) Japan

Answer: B

- **JIMEX:** The fifth edition of the **India-Japan Maritime Bilateral Exercise (JIMEX)** between the Indian Navy and the Japan Maritime Self-Defence Force (JMSDF), will be held in **the Arabian Sea.**
- **Ajeya Warrior Exercise:** Armies of **India and UK** conducting 'Ajeya Warrior' exercise at **Chaubatia, Uttarakhand.**
- **17th Yudh Abhyas:** the joint military training between Indian and the US Armies concluded at **Joint Base Elmendorf Richardson, Alaska.** The Indian contingent comprised 350 personnel of an Infantry Battallion group of the MADRAS Regiment while the US contingent consisted of 300 soldiers of the First Squadron (Airborne) of the 40th Cavalry Regiment.

Reference: Dec 22 Current Tit-Bits Magazine

119. The journey of the First Phage of Sagar Parikrama Yatra, an. initiative. Of the Government of India, was started from:

(a) Andaman and Nicobar Islands

(b) Maharashtra

(c) Kamataka

(d) **Gujarat**

Answer: d

- **The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying**, Government of India has launched the '**Sagar Parikrama'** program on the occasion of 75th Azadi Ka Amrit Mahotsav. **Sagar Parikrama program** is being organized through a pre-decided sea route covering coastal states/UTs. **The Phase –I programme of 'Sagar Parikrama'** has been organized in Gujarat, started **on 5th March, 2022** from **Mandvi, Gujarat** and ended on 6th March 2022 at **Porbandar, Gujarat**. 'Sagar Parikrama' program envisages to cover the **maritime States/UTs in a phased manner**.

Reference: March 22 Current Tit-Bits Magazine

120. The annul Kheer Bhawani Mela is organized at:

(a) KabawValley

(b) Kashmir Valley

(c) Dah Hanu Valley

(d) Upper Dibang Valley

Answer: b

Explanation:

Mela Kheer Bhawani festival was celebrated in **Jammu and Kashmir** in the month of June. Hundreds of Kashmiri Pandits paid their obeisance at the famous Ragnya Devi temple in Ganderbal district in the Valley and celebrated the annual Kheer Bhawani mela.

Source: http://www.jammu.com/kashmir/kheer-bhawani.php

121. NISAR satellite is manufactured jointly by Indian Space Research Organisation and:

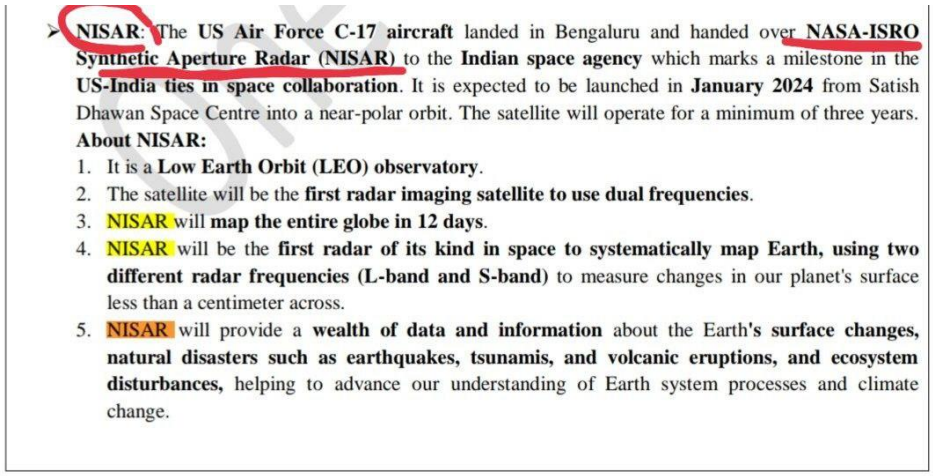
(a) Japan Aerospace Exploration Agency

(b) National Aeronautics and Space Administration

(c) Russian Federal Space Agency

(d) European Space Agency

Answer: B



➢ **NISAR**: The **US Air Force C-17 aircraft** landed in Bengaluru and handed over **NASA-ISRO Synthetic Aperture Radar (NISAR)** to the **Indian space agency** which marks a milestone in the **US-India ties in space collaboration**. It is expected to be launched in **January 2024** from Satish Dhawan Space Centre into a near-polar orbit. The satellite will operate for a minimum of three years.

About NISAR:

1. It is a **Low Earth Orbit (LEO) observatory**.
2. The satellite will be the **first radar imaging satellite to use dual frequencies**.
3. NISAR will **map the entire globe in 12 days**.
4. NISAR will be the **first radar of its kind in space to systematically map Earth, using two different radar frequencies (L-band and S-band)** to measure changes in our planet's surface less than a centimeter across.
5. NISAR will provide a **wealth of data and information** about the Earth's **surface changes, natural disasters such as earthquakes, tsunamis, and volcanic eruptions, and ecosystem disturbances,** helping to advance our understanding of Earth system processes and climate change.

Reference: Feb 23 Current Tit-Bits Magazine

122. 'Operation Kaveri' is a rescue operation launched by the Government of India to evacuate Indian citizens who were stranded

(a) Kuwait

(b) Ukraine

(c) Afghanistan

(d) Sudan

Answer: D

CURRENT TIT-BITS Initiative by OneClass.in (MISSIONCAPFHUB)

MISCELLANEOUS

➢ **Operation Kaveri**: **India** launches **Operation Kaveri** to evacuate stranded citizens from war-hit **Sudan**. India has positioned two transport aircraft of the **IAF named C-130J** in the Saudi Arabian city of Jeddah and **naval ship INS Sumedha** at Port Sudan as part of its contingency plans to evacuate the stranded Indians. Operation named Kaveri from the **river Kaveri** itself.

Reference: April 23 Current Tit-Bits Magazine

123. 'Rail Vikas Nigam Limited' isa :

(a) Maharatna CPSE

(b) Navaratna CPSE

(c) Miniratna I CPSE

(d) Miniratna II CPSE

Answer: B

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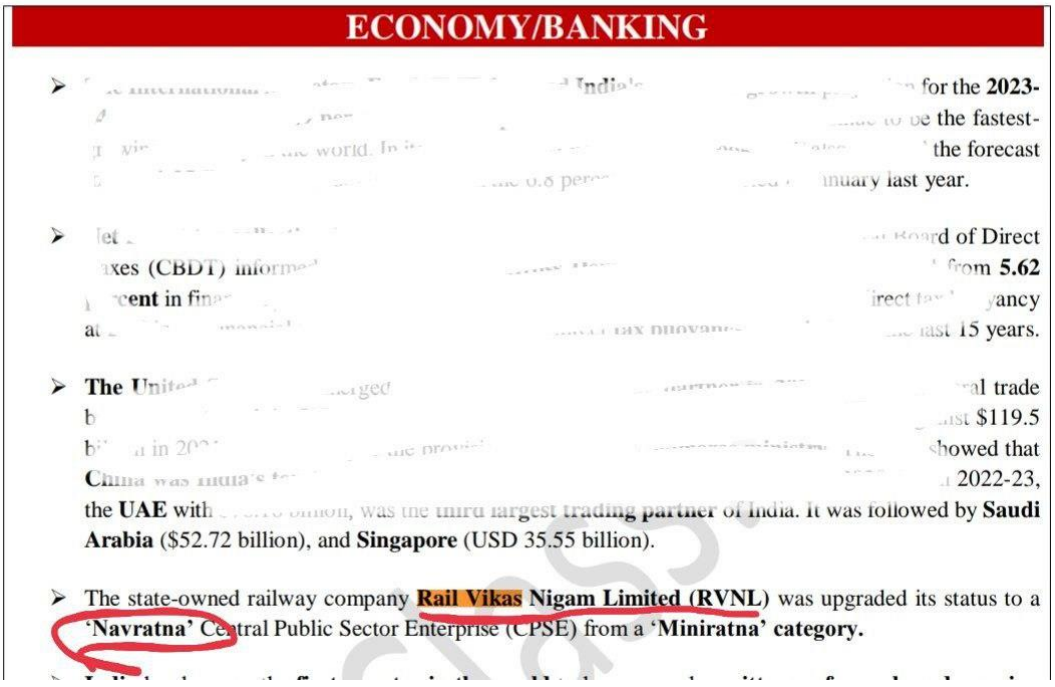


ECONOMY/BANKING

- ... for the **2023-** ... the fastest- ... the forecast ... last year.
- ... Board of Direct ... from **5.62** ... ancy ... last 15 years.
- **The** ... al trade ... $119.5 ... showed that ... 2022-23, the **UAE** with ... was the third largest trading partner of India. It was followed by **Saudi Arabia** ($52.72 billion), and **Singapore** (USD 35.55 billion).
- The state-owned railway company **Rail Vikas Nigam Limited (RVNL)** was upgraded its status to a **'Navratna'** Central Public Sector Enterprise (CPSE) from a **'Miniratna' category.**

Reference: April 23 Current Tit-Bits Magazine

124. What are Airawat, Param Siddhi, Pratyus Mihir?.

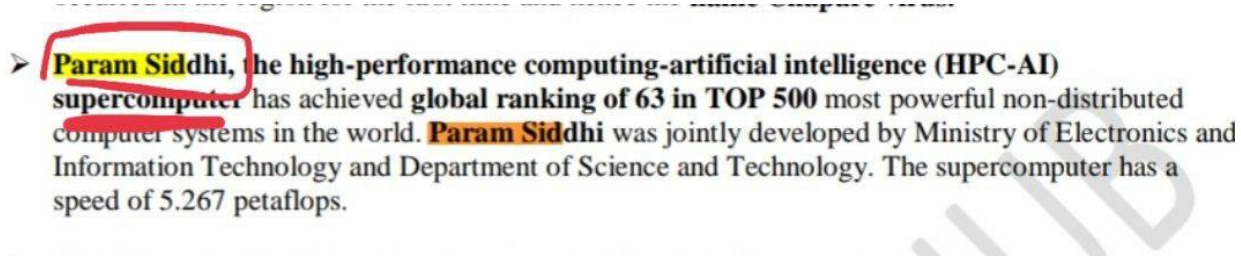
(a) Super Computers of India

(b) Battle Tanks of India

(c) Supersonic Missiles of India

(d) Indian Naval Ship

Answer: A



- **Param Siddhi, the high-performance computing-artificial intelligence (HPC-AI) supercomputer** has achieved **global ranking of 63 in TOP 500** most powerful non-distributed computer systems in the world. **Param Siddhi** was jointly developed by Ministry of Electronics and Information Technology and Department of Science and Technology. The supercomputer has a speed of 5.267 petaflops.

Reference: April 22 Current Tit-Bits Magazine

125. Which one of the following Indian Naval Ships has recently concluded a. 17,000-nm trans-ocean intercontinental voyage?

(a) INS Tarangini

(b) INS Mandovi

(c) INS mhadei

(d) INS Tarini

Answer: D

CURRENT TIT-BITS Initiative by OneClass.in (MISSIONCAPFHUB)

- **INSV Tarini's** historic voyage from **Goa to Rio de Janerio** via Cape Town of a **17000nm trans-ocean inter-continental voyage**, after 188 days eventful days of achievement.