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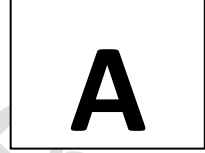
BY SWAPNIL WALUNJ & TEAM

ANSWER KEY FOR UPSC CAPF 2022 PAPER 1

T.B.C.: FIAS-PTS20-L2F8

Test Booklet Series

GENERAL ABILITY AND INTELLIGENCE



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 2022** will be announced by Tuesday (09.08.2022) on our Website (www.missioncapfhub.com), official telegram channel [@missioncapfhub](https://t.me/missioncapfhub)
5. We have provided **detailed explanation & reference** of every question in this document.

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Q.1 Which one of the following is the difference of the sum of cubes of first ten natural numbers and the sum of squares of first ten natural numbers?

(a) 2400

(b) 2640

(c) 2880

(d) 2000

Answer: b

Explanation

Cube sum

$$1+8+27+64+125+216+343+512+729+1000 = 3025$$

Square sum

$$1+4+9+16+25+36+49+64 +81 +100 = 385$$

Total sum=2640

Q. 2 A person buys an item from a shop for which the shopkeeper offers a discount of 10% on the marked price. The person pays using an e-wallet which gives 10% cash back. Which one of the following is the value of effective discount?

(a) 20%

(b) 18%

(c) 19%

(d) 21%

Answer: c

Explanation

Let, m.p = 100

Price after 10% discount = 90

Wallet gives 10%. Cashback

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$$\text{Price} = 90 - 9 = 81$$

So, effective price = 81

$$\text{Total discount} = 19$$

$$\text{Total discount percentage} = 19\%$$

Q.3 A solid spherical ball made of iron is melted and two new balls are made whose diameters are in the ratio of 1: 2. The ratio of the volume of the smaller new ball to the original ball is

(a) 1:3

(b) 1:5

(c) 2:9

(d) 1:9

Answer: d

Explanation

$$\frac{4}{3} \pi r^3 = \frac{4}{3} \pi r_1^3 + \frac{4}{3} \pi r_2^3$$

$$d_1/d_2 = \frac{1}{2}$$

$$r_1/r_2 = \frac{1}{2}$$

$$\text{so, } r_1 < r_2$$

$$r_2 = 2r_1$$

$$\frac{4}{3} \pi r^3 = \frac{4}{3} \pi r_1^3 + \frac{4}{3} \pi r_2^3$$

$$= \frac{4}{3} \pi (r_1^3 + 8r_1^3)$$

$$= \frac{4}{3} \pi 9r_1^3$$

$$\frac{4}{3} \pi r^3 = \frac{4}{3} \pi 9r_1^3$$

original volume = 9 * volume of smaller ball

$$\text{ratio} = 1/9$$

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Q.4 Suppose a bank gives an interest of 10% per annum compounded annually for a fixed deposit for a period of two years. What should be the simple interest rate per annum if the maturity amount after two years is to remain the same?

- (a) 10%
- (b) 10.5%**
- (c) 11%
- (d) 12%

Answer: b

Explanation

Let, amount = 100

$$C. I = P (1 + 10/100)^2 \\ = 100 (11/10)^2 = 121$$

So, interest = 21

Simple interest

$$21 = (100 \times 2 \times r) / 100$$

$$r = 10.5\%$$

Q.5 A runner's average speed reduces by 25% every hour. If he runs 16 km in the first hour and he runs for 3 hours, then what is his overall average speed?

- (a) 12 km/hr
- (b) 12.33 km/hr**
- (c) 10.33 km/hr
- (d) 13 km/hr

Answer: b

Explanation

Avg. speed = Total Dist./ Total. time

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1 hour = 16 km

2nd hour = 12 km

3rd hour = 9 km

Total Distance = $16+12+9 = 37$ km

Avg. speed = $37 / 3 = 12.33$ km/hr

Q.6 Trough and ridge are

(a) Elongated area of low pressure and of high pressure respectively

(b) Elongated areas of low pressure

(c) Elongated areas of high pressure

(d) Elongated area of high pressure and of low pressure respectively.

Answer: (a)

Explanation: Ridges and troughs are often mentioned on the weather forecast. A ridge is an elongated area of relatively high pressure extending from the center of a high-pressure region. A trough is an elongated area of relatively low pressure extending from the center of a region of low pressure. The Inter Tropical Convergence Zone (ITCZ,) is a broad trough of low pressure in equatorial latitudes. This is where the northeast and the southeast trade winds converge. This convergence zone lies more or less parallel to the equator but moves north or south with the apparent movement of the sun.

Reference:

1. NCERT- Contemporary India - 1 Page no.30.
2. <https://www.pbs.org/weta/roughscience/series2/challenges/weather/page8.html>

Q.7 The boundary layer of the forest at which the energy exchange occurs and some insolation is returned directly to space is

(a) Forest floor

(b) Forest soil

(c) Forest canopy

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(d) Forest litter

Answer: (c)

Explanation: In forest ecology, canopy also refers to the upper layer or habitat zone, formed by mature tree crowns and including other biological organisms. Sometimes the term canopy is used to refer to the extent of the outer layer of leaves of an individual tree or group of trees

Reference: Wikipedia

Q.8 The organisms that prefer concentration habitats refer high salt

(a) alkaliphiles

(b) Calcifuges

(c) halophiles

(d) nitrophiles

Answer: (c)

Explanation: Microorganisms called halophiles (“salt loving”) actually require high salt concentrations for growth. These organisms are found in marine environments where salt concentrations hover at 3.5%. Extreme halophilic microorganisms, such as the red alga *Dunaliella salina* and the archaeal species *Halobacterium* in , grow in hypersaline lakes such as the Great Salt Lake.

Archaeobacteria -These bacteria are special since they live in some of the most harsh habitats such as extreme salty areas (halophiles), hot springs (thermoacidophiles) and marshy areas (methanogens)

Reference:

1.NCERT- Class XI Biology Page no. 19

2.[https://bio.libretexts.org/Bookshelves/Microbiology/Microbiology_\(OpenStax\)/09%3A_Microbial_Growth/9.05%3A_Other_Environmental_Conditions_that_Affect_Growth](https://bio.libretexts.org/Bookshelves/Microbiology/Microbiology_(OpenStax)/09%3A_Microbial_Growth/9.05%3A_Other_Environmental_Conditions_that_Affect_Growth)

Q.9 Which one of the following is not an operating system?

(a) MS-Windows

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(b) Linux

(c) Ubuntu

(d) MS-Excel

Answer: d

Explanation: MS-Excel is spreadsheet **software program**, a powerful data visualization and analysis tool.

Q.10 Which one of the following protocols is not an application layer of the TCP/IP model?

(a) FTP

(b) HTTP

(c) DNS

(d) IP

Answer: d

Explanation: Internet Protocol (IP) is **the method or protocol by which data is sent from one computer to another on the internet**. The most significant protocol at **layer 3 (also called the network layer) is the Internet Protocol, or IP**.

Q.11 Which one of the following is a semiconductor device that is used to increase the power of the incoming signals by preserving the shape of the original signal?

(a) Register

(b) Transistor

(c) Flip-flop

(d) Diode

Answer: - (b)

Explanation: - Transistor act as an amplifier of signal in electronic devices amplifying or increasing signal strength.

Reference: - CBSE Class 12th physics chapter 14-page number 491,497,500

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Q. 12 Which of the following combinations correctly represents the genetic materials in prokaryotes and eukaryotes respectively?

(a) Nucleoid and Chromatin

(b) Chromatin and Nucleoid

(c) Nucleoid and Nucleolus

(d) Nucleolus and Chromatin

Answer: A

Explanation:

The screenshot shows a PDF document with the following text:

...divide, the chromatin material gets organised into chromosomes.

The nucleus plays a central role in cellular reproduction, the process by which a single cell divides and forms two new cells. It also plays a crucial part, along with the environment, in determining the way the cell will develop and what form it will exhibit at maturity, by directing the chemical activities of the cell.

In some organisms like bacteria, the nuclear region of the cell may be poorly defined due to the absence of a nuclear membrane. Such an undefined nuclear region containing only nucleic acids is called a nucleoid. Such organisms, whose cells lack a nuclear membrane, are called prokaryotes (Pro = primitive or primary; karyote = karyon = nucleus). Organisms with cells having a nuclear membrane are called eukaryotes.

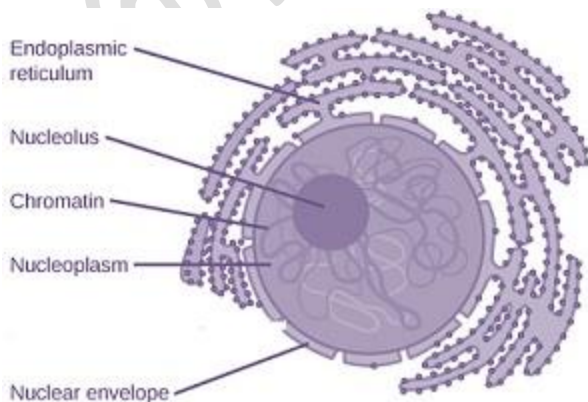
Prokaryotic cells (see Fig. 5.4) also lack most of the other cytoplasmic organelles

can see a large region of each cell enclosed by the cell membrane. This region takes up very little stain. It is called the cytoplasm. The cytoplasm is the fluid content inside the plasma membrane. It also contains many specialised cell organelles. Each of these organelles performs a specific function for the cell.

Cell organelles are enclosed by membranes. In prokaryotes, beside the absence of a defined nuclear region, the membrane-bound cell organelles are also absent. On the other hand, the eukaryotic cells have nuclear membrane as well as membrane-enclosed organelles.

The significance of membranes can be illustrated with the example of viruses. Viruses lack any membranes and hence do not show characteristics of life until they enter a living body and use its cell machinery to multiply.

Chromatin:



The nucleus has a double layered covering called nuclear membrane. The nuclear membrane has pores which allow the transfer of material from inside the nucleus to its outside, that is, to the cytoplasm (which we will talk about in section 5.2.4).

The nucleus contains chromosomes, which are visible as rod-shaped structures only when the cell is about to divide. Chromosomes contain information for inheritance of characters from parents to next generation in the form of DNA (Deoxyribo Nucleic Acid) molecules. Chromosomes are composed of DNA and protein. DNA molecules contain the information necessary for constructing and organising cells. Functional segments of DNA are called genes. In a cell which is not dividing, this DNA is present as part of chromatin material. Chromatin material is visible as entangled mass of thread like structures. Whenever the cell is about to divide, the chromatin material gets organised into chromosomes.

associated with membranous vesicles (bag like structures) but not with plastids as in eukaryotic cells (see section 5.2.5).

Fig. 5.4: Prokaryotic cell

5.2.4 CYTOPLASM

When we look at the temporary mounts of onion peel as well as human cheek cells, we can see a large region of each cell enclosed by the cell membrane. This region is known as the cytoplasm.

Reference: (Class 9th NCERT Chapter 5 The Fundamental Unit of Life Page No: 62)

Q.13 Lysosomes are sacs of the cell filled with digestive enzymes. These digestive enzymes are synthesized by

- (a) Golgi bodies
- (b) Smooth endoplasmic reticulum
- (c) Rough endoplasmic reticulum**
- (d) lysosome itself

Ans: C

Explanation:

LYSOSOMES

Structurally, lysosomes are membrane-bound sacs filled with digestive enzymes. **These enzymes are made by RER.** Lysosomes are a kind of waste disposal system of the cell. These help to keep the cell clean by digesting any foreign material as well as worn-out cell organelles. Foreign materials entering the cell, such as bacteria or food, as well as old organelles end up in the lysosomes, which break complex substances into simpler

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substances. Lysosomes are able to do this because they contain powerful digestive enzymes capable of breaking down all organic material.

Reference: NCERT 9th class Chapter No. 5th Page No. 64

Q.14 Which of the following best represents the cells of a meristem of plant?

(a) Dense cytoplasm, thin cell wall, large nuclei and absence of vacuoles

(b) Dense cytoplasm, thin cell wall, large nuclei and large vacuoles

(c) Dense cytoplasm, thin cell wall, small nuclei and absence of vacuoles

(d) Dense cytoplasm, thick cell wall, small nuclei and large vacuoles

Ans: A

Cells of meristematic tissue are very active, they have dense cytoplasm, thin cellulose walls and prominent nuclei. They lack vacuoles.

Reference: NCERT 9th class Chapter No. 6th Page No. 70

Q.15 Which one of the following animals has a four-chambered heart?

(a) King cobra

(b) Turtle

(c) Chameleon

(d) Crocodile

Ans: D

Class – Reptilia

The class name refers to their creeping or crawling mode of locomotion (Latin, *reperere* or *reptum*, to creep or crawl). They are mostly terrestrial animals and their body is covered by dry and cornified skin, epidermal scales or scutes (Fig. 4.22). They do not have external ear openings.

Tympanum represents ear. Limbs, when present, are two pairs. **Heart is usually three-chambered, but four-chambered in crocodiles.** Reptiles are poikilotherms. Snakes and lizards shed their scales as skin cast. Sexes are separate. Fertilisation is internal. They are oviparous and development is direct.

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Reference: NCERT 11th class No. 4th Chapter Animal Kingdom Page No. 58

Q. 16 One way of incorporating desired characters into crop varieties is hybridization. In this process, there is crossing between genetically dissimilar plants. Which one of the following crossings will not refer to hybridization?

- (a) Intervarietal
- (b) Interspecific
- (c) Intergenic
- (d) Intragenic**

Ans: D

Explanation:

CROP VARIETY IMPROVEMENT

This approach depends on finding a crop variety that can give a good yield. Varieties or strains of crops can be selected by breeding for various useful characteristics such as disease resistance, response to fertilisers, product quality and high yields. One way of incorporating desirable characters into crop varieties is by hybridisation. Hybridisation refers to crossing between genetically dissimilar plants.

This crossing may be intervarietal (between different varieties), interspecific (between two different species of the same genus) or intergeneric (between different genera).

Reference: NCERT 9th class Chapter No. 15th Page No. 204

Q.17 Depending on the requirements, plant nutrients are classified as micronutrients and macronutrients. Which one of the following is an example of a macronutrient?

- (a) Manganese
- (b) Copper
- (c) Magnesium**
- (d) Chlorine

Ans: C

Explantion:

Table 15.1: Nutrients supplied by air, water and soil

Source	Nutrients
Air	carbon, oxygen
Water	hydrogen, oxygen
Soil	(i) <i>Macronutrients</i> : nitrogen, phosphorus, potassium, calcium, magnesium, sulphur (ii) <i>Micronutrients</i> : iron, manganese, boron, zinc, copper, molybdenum, chlorine

Reference: NCERT 9th class Chapter No. 15th Page No. 206

Q.18 Buds produced in the notches along the leaf margin of Bryophyllum fall on soil and develop into new plants. This is an example of which one of the following types of reproduction?

(a) **Vegetative propagation**

(b) Budding

(c) Spore formation

(d) Regeneration

Ans: A

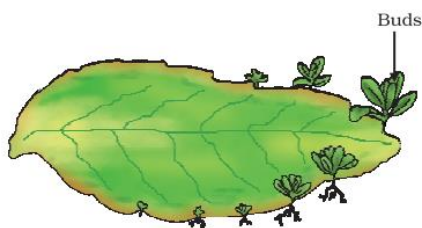


Figure 8.5
Leaf of Bryophyllum
with buds

Vegetative Propagation

There are many plants in which parts like the root, stem and leaves develop into new plants under appropriate conditions. Unlike in most animals, plants can indeed use such a mode for

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reproduction. This property of vegetative propagation is used in methods such as layering or grafting to grow many plants like sugarcane, roses, or grapes for agricultural purposes. Plants raised by vegetative propagation can bear flowers and fruits earlier than those produced from seeds. Such methods also make possible the propagation of plants such as banana, orange, rose and jasmine that have lost the capacity to produce seeds. Another advantage of vegetative propagation is that all plants produced are genetically similar enough to the parent plant to have all its characteristics. Similarly buds produced in the notches along the leaf margin of Bryophyllum fall on the soil and develop into new plants.

Reference: NCERT Class 10th Chapter No. 8th Page No. 132

Q.19 Phloem tissue are mostly y responsible for transport of

- (a) Water
- (b) Oxygen
- (c) Minerals
- (d) Food**

Ans: D

Explanation:

Xylem consists of tracheids, vessels, xylemparenchyma and xylem fibres. Tracheids and vessels have thick walls, and many are dead cells when mature.

Tracheids and vessels are tubular structures. This allows them to transport water and minerals vertically. The parenchyma stores food.

Xylemfibres are mainly supportive in function. Phloem is made up of five types of cells: sieve cells, sieve tubes, companion cells, phloem fibres and the phloem parenchyma. Sieve tubes are tubular cells with perforated walls. Phloem transports **food** from leaves to other parts of the plant. Except phloem fibres, other phloem cells are living cells.

Reference: NCERT 9th class Chapter No. 6th Page No. 70

Q.20 Two objects, x and y, have equal mass and are moving with speeds u and 3u respectively. Their kinetic energy K_x and K_y are related as

- (a) $K_x = K_y$

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(b) $2 K_x = K_y$

(c) $9 K_x = K_y$

(d) $3 K_x = K_y$

Answer: - (c)

Explanation: - Kinetic energy is $\frac{1}{2} mv^2$, so if masses are equal then square of velocity is the deciding factor in final energy. So, if velocity is 3 times then Kinetic energy would be square of 3 that is 9 times the energy of another object

Reference: - CBSE class 9th chapter 11-page number 151

Q.21 Which of the following is not the unit of pressure?

(a) pascal (Pa)

(b) N/m^2

(c) J/m^2

(d) bar

Answer: - (c)

Explanation: J/m^2

Reference: - CBSE class 9th chapter 10-page number 139

Q.22 Which one of the following materials cannot be used to make a convex lens?

(a) Aluminium

(b) Glass

(c) Sapphire

(d) Water

Answer: - a)

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Explanation: - Lenses require incident ray to pass through them and aluminium is opaque or material with high refractive index cannot be used to make lens so refraction cannot happen so cannot be used to make convex lens.

Reference: - CBSE class 10th chapter 10 page number 172,174,175

Q.23 The optical phenomenon responsible for the blue colour of sky is

- (a) Dispersion
- (b) Reflection
- (c) Refraction
- (d) Scattering**

Answer: - (d)

Explanation: The blue color of the sky is caused by the scattering of sunlight off the molecules of the atmosphere. This scattering, called Rayleigh scattering is more effective at short wavelengths (the blue end of the visible spectrum).

Reference: - CBSE class 10th chapter 11-page number 196

Q.24 The electrical device used for converting mechanical energy, into electrical energy is called

- (a) Voltmeter
- (b) Ammeter
- (c) Motor
- (d) Generator**

Answer: - (d)

Explanation: In electricity generation, a generator is a device that converts **motive power (mechanical energy) into electric power for use in an external circuit.**

Reference: - CBSE class 10th chapter 13-page number 236,237

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Q.25 The magnitude of focal length of a concave lens is 2 m. What is the power of the lens?

- (a) +0.5 dioptre
- (b) – 0.5 dioptre**
- (c) + 2.0 dioptre
- (d) – 1.0 dioptre

Answer: - (b) -0.5 dioptre

Explanation: - Power of lens = $1/\text{focal length of lens}$

Positive for convex lens and negative for concave lens

Reference: -CBSE class 10th chapter 10-page number 183,184

Q.26 At the time of short circuit, the current in an electric circuit

- (a) Becomes zero
- (b) Remains same
- (c) Increases sharply**
- (d) Decreases sharply

Answer: (c)

Explanation: **During a short circuit, the current in the circuit increases sharply.**

Reference: - CBSE class 10th chapter 13th page number 238

Q.27 If the linear momentum of a moving 28. object changes by two times, then its kinetic energy will change by a factor of

- (a) 2
- (b) 4**
- (c) 6
- (d) 8

Answer: - (b)

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Explanation: -Kinetic energy is given by

$$K.E.=\frac{1}{2}mv^2$$

while the momentum is

$$p=mv$$

Momentum of a body of given mass, is directly proportional to its velocity.

Kinetic energy of a body of given mass, is directly proportional to its square of its velocity.

When momentum is doubled, mass remaining constant, this means velocity is doubled.

Hence, kinetic energy becomes $2^2=4$

Reference: -CBSE Class 9th chapter 9-page number 119, 123

CBSE class 11th chapter 6-page number 129,130

Q.28 Which one of the following oxides reacts with both acid and base?

(a) Aluminium oxide

(b) Calcium oxide

(c) Sodium oxide

(d) Potassium oxide

Answer :- (a)

Explanation: - Oxides which acts as both acid and base to create salt and water in a reaction is called amphoteric oxide. Aluminium oxide is example of such oxide

Reference: - CBSE class 10thchapter 3-page number 41

Q.29 Which of the following makes bread soft and spongy when baking soda is added?

(a) Sodium salt of acid

(b) NaHCO_3

(c) CO_2

(d) H_2O

Answer: - c

Explanation: - Baking soda on heating produces carbon dioxide which get into dough and bubbles out which makes bread soft and spongy

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Reference: -CBSE Class 10th chapter 2-page number 31

Q.30 The average age of father and elder son is 35 years, the average age of father and younger son is 32 years and the average age of the two sons is 17 years. What is the average age of the father and his two sons?

(a) 30 years

(b) 27 years

(c) 28 years

(d) 29 year

Answer: c

Explanation:

$$F + Se = 70 \dots (1)$$

$$F + Ys = 64 \dots (2)$$

$$Se + Ys = 34 \dots (3)$$

$$\text{Eq1} - \text{eq2}$$

We get

$$Se - Ys = 6 \dots (4)$$

Add eq 3 and eq 4

$$Se - Ys = 6$$

$$Se + Ys = 34$$

$$2Se = 40$$

$$Se = 20$$

$$\therefore Se - Ys = 6$$

$$Ys = Se - 6 = 20 - 6 = 14$$

$$F + Se = 70$$

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$$F = 70 - 20 = 50$$

$$\text{Avg of } F + Y_s + S_e = (50 + 14 + 20) / 3$$

$$= 84 / 3$$

$$= 28 \text{ yrs.}$$

Q.31 A number is 124 more than its one-third. What is that number?

(a) 194

(b) 180

(c) 189

(d) 186

Answer: d

Explanation:

Let number be x

$$x = x/3 + 124$$

$$2x/3 = 124$$

$$x = 62 \times 3$$

$$x = 186$$

Q.32 A car travels 3/4th of the distance at a speed of 60km/hr and the remaining 1/4th of the distance at a speed of v km/hr. If the average speed for the full journey is 50 km/hr, then the value of v is

(a) 40

(b) 30

(c) 100/3

(d) 35

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Answer: c

Explanation:

let distance = 100km

Avg. speed = Total Dist /Total time

$t_1 = 75 / 60$ (as 3/4th distance = 75km

$t_2 = 25/v$

So, $50 = 100 / ((75/60) + (25/ 60))$

$5/4 + 25/v = 2$

$5V + 100 = 8V$

$3V = 100$

$V = 100 / 3$ km/hr.

Q.33 Suppose A and B can complete a work together in 10 days. If B alone can complete the work in 15 days, then in how many days can A alone finish the work?

(a) 20 days

(b) 24 days

(c) 25 days

(d) 30 days

Answer: d

Explanation:

$1/a + 1/b = 1/10$

$1/a = 1/10 - 1/15$

$1/a = 5/150$

$a = 30$

Q. 34 If the average of the first four of five numbers in decreasing order is 25 and the average of the last four numbers is 20, then what is the difference between the first and the last number?

- (a) 5
- (b) 10
- (c) 15
- (d) 20**

Answer: d

Explanation:

No. be a, b, c, d, e ($a > b > c > d > e$)

1st condition i.e. $25 = (a+b+c+d)/4$

$$a+b+c+d = 100 \dots\dots(1)$$

2nd condition i.e. $20 = (e+d+c+b) / 4$

$$b+c+d+e = 80 \dots\dots 2$$

Equation 1 - equation 2

$$a-e = 20.$$

Q.35 Borax is prepared from

- (a) Calcium carbonate
- (b) Magnesium carbonate
- (c) Potassium carbonate
- (d) Sodium carbonate**

Answer: - (d)

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Explanation: **Borax** is a sodium salt of tetraboric acid. It is obtained from colemanite ore by boiling its solution with sodium carbonate.

Reference: - CBSE class 10th chapter 2-page number 32

Q.36 Cinnabar is an ore of

(a) **Mercury**

(b) Zinc

(c) Copper

(d) Lead

Answer: - (a)

Explanation: Cinnabar is a toxic ore of **mercury**, composed of mercury sulfide (HgS).

Reference: -CBSE class 10th chapter 3-page number 51

Q.37 White gold is an alloy of

(a) **Gold, nickel and palladium**

(b) Gold, cobalt and palladium

(c) Gold, titanium and platinum

(d) Gold, magnesium and palladium

Answer: - (a)

Explanation: White gold is an alloy containing **gold, nickel and palladium**.

Q.38 . Hydrogenation of alkenes can be carried out in the presence of

(a) Copper

(b) Zinc

(c) Aluminium

(d) Nickel

Answer: - (d)

Explanation: - Unsaturated hydrocarbons (Alkenes) add hydrogen in the presence of catalysts such as palladium or nickel to give saturated hydrocarbons.

Reference: - CBSE class 10th chapter 4-page number 71

Q.39 Calcium oxide reacts with water to produce slaked lime. It is an example of

(a) Combination reaction

(b) Decomposition reaction

(c) Oxidation reaction

(d) Addition reaction

Answer: - (a)

Explanation: Calcium oxide combines with water to form slaked lime. Hence, it is a combination reaction. A **combination reaction** is a reaction where two or more elements or compounds combine to form a single compound.

Reference: -CBSE class 10th chapter 1 page number 6

Q.40 The atomic radius of hydrogen atom is

(a) 37 nanometer

(b) 37 picometer

(c) 17 picometer

(d) 57 picometer

Answer: b

Explanation: Atomic size: The term atomic size refers to the radius of an atom.

The atomic size may be visualised as the distance between the centre of the nucleus and the outermost shell of an isolated atom.

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The atomic radius of hydrogen atom is 37 pm (picometre, 1 pm = 10⁻¹²m).

Reference: 10th Science NCERT pg, 88.

Q.41 There is a group of 5 people among which there is one couple. In how many ways can these 5 people be seated in a row having 5 chairs if the couple is to be seated next to each other?

(a) 24

(b) 48

(c) 60

(d) 120

Answer: b

Explanation:

Couple seating next to each other, so it treated as 1.

arrangement = 4!x2!

(couple arrangement)

1×2×3×4×2= 48

Q.42 Two friends 10km apart start running towards each other at speeds of 10 km/hr and 14 km/hr respectively. After how much time will they meet each other?

(a) 20 minutes

(b) 25 minutes

(c) 28 minutes

(d) 30 minute

Answer: b

Explanation:

suppose they meet after x hr

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Distance Covered by A = $10x$ and

by B = $14x$

total distance ..

$$10x + 14x = 10,$$

$$24x = 10$$

$$x = 10 / 24 = 5/12 \text{ hr}$$

$$1 \text{ hr} = 60 \text{ min}$$

$$5/12 \text{ hr} = ?$$

$$? = 60 \times 5/12$$

$$? = 25 \text{ min}$$

Q.43 A coin is tossed 3 times. The probability of getting exactly 2 heads is

(a) $1/3$

(b) $3/8$

(c) $1/2$

(d) $5/8$

Answer: b

Explanation:

Possible outcome

= HHH, TTT, HTT, THT, TTH, THH, HTH, HHT total outcome = 8.

getting exactly 2 heads.

= THH, HTH, HHT = 3

So, probability = $3/8$

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Q.44 A test consists of 25 MCQs. Each correct answer gives +4 marks and incorrect answer gives -1 mark. If a candidate scores 74 marks, then how many questions were left unattempted?

(a) 4

(b) 3

(c) 5

(d) 9

Answer: a

Explanation:

Trial & error,

unattempted que = 4

then attempted = 21

Correct 19 ... marks =76

Wrong =2 ∴ marks =-2

Total= 74

Q.45 A person has a total of 100 coins consisting of Rs 2 and Rs 5 coins. If the total value of the coins is Rs 320, then the number of Rs 2 coins is

(a) 40

(b) 50

(c) 60

(d) 70

Answer: c

Explanation: 2 coin = x

5 coin =100-x

$2x + 5(100-x) = 320$

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$$2x + 500 - 5x = 320$$

$$\therefore 180 = 5x - 2x$$

$$3x = 180$$

$$x = 60$$

Q.46 The technology known as 'Electro-magnetic Air Lift System' is sometimes talked about in reference to

- (a) Launching guided missiles from silos
- (b) Launching aircraft from warships**
- (c) Navigation of nuclear-powered submarines
- (d) Development of reusable rockets

Answer: b

Explanation: The U.S. Navy is getting ready to **launch** the first ship-board tests of a new **Electromagnetic Aircraft Launch System** designed to replace steam catapults and propel fighter jets and other aircraft off the deck of an aircraft carrier.

Q.47 Consider the following statements:

1. Aluminium powder is used as a solid fuel for rocket engines.
2. Compared to liquid fuel propelled rocket engines, the thrust per amount of fuel burned is higher in solid fuel propelled rocket engines.

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

Answer: a

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Explanation: Aluminum powder is a common ingredient in conventional solid rocket propellants. It is used to increase specific impulse as well as stability.

Solid rockets are cheaper to manufacturer and offer good value for their cost. Liquid propellant engines offer higher performance; that is, they deliver greater thrust per unit weight of propellant burned. hence statement 2 is wrong.

Q.48 Consider the following missiles :

1. Agni-I
2. BrahMos
3. Dhanush

Which of the above is/are cruise missile/missiles?

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

Answer: b

floating Border Outposts (BOP) **Sutlej, Kaveri and Narmada** have been built by the **Koch Shipyard**. He also flagged off the **floating Boat Ambulance** and laid the foundation stone of 'Maitri Sangrahalaya' (Friendship Museum) of his two day visit to **West Bengal**.

- The India-Russian joint venture, **BrahMos Aerospace**, successfully fired the **extended-range version of BrahMos Air Launched Cruise Missile (ALCM)** from a **Sukhoi-30MKI fighter aircraft**, striking a target at a range of **400 km** from the aircraft. This was the **first launch** of the extended-range ALCM from the **Sukhoi-30MKI aircraft**. A Sukhoi-30MKI squadron is based in **Thanjavur, Tamil Nadu**, from where it can undertake missions over the Arabian Sea, Bay of Bengal or the northern Indian Ocean. Its fighters are armed with the **BrahMos ALCM** and there are provisions for mid-air refuelling to enable these aircraft to undertake long missions at extended ranges.

The BrahMos missile can be launched from submarines, ships, aircraft or land and has been inducted into all three services -- **Army, Navy and Air Force**.

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Ballistic Missile = is a rocket-propelled self-guided strategic-weapons system that follows a parabolic trajectory to deliver a payload from its launch site to a predetermined fixed target.

Ballistic Missile Defence system (BMD) of India = Agni, K-4 (SLBM), Prahar, Dhanush, Prithvi and Trishul.

➤ **Ranasesagar exercise** = The second edition of the bilateral naval exercise "Ranasesagar".

Reference: May 2022 Missioncapfhub Current Tit-Bits

Q.49 With reference to India's defence, consider the following helicopters:

1. Cheetah
2. Chetak
3. Rudra

Which of the above has/ have turret gun, rocket system and air-to-air missile?

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

Answer: d

Explanation: **Rudra**: 20 mm Turret Gun, 70 mm Rocket System And Air to Air Missile. Rudra is the Weaponised version of the Advanced Light Helicopter (Dhruv) designed and developed by Hindustan Aeronautics Limited (HAL)

Source: Official website of Hindustan Aeronautics Limited (HAL).

Q.50 Recently, India gave a coastal radar system to which one of the following countries?

- (a) Bangladesh
(b) Maldives
(c) Sri Lanka
(d) United Arab Emirates

Answer: b

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Explanation: India handed over a **coastal radar system to the Maldives** that will play a key role in enhancing regional security as the two countries launched several development projects being implemented under an aid package worth more than \$2.6 billion.

Q. 51 Which one of the following artworks was hailed by Sister Nivedita as the 'first masterpiece of Indian art'?

- (a) **Bharatmat a by Abanindranath Tagore**
- (b) Arjuna and Subhadra by Raja Ravi Varma
- (c) Sita in Captivity in Lanka by Abanindranath Tagore
- (d) Sati by Nandalal Bose

Answer: A

Explanation: Abanindranath had first conceived of an idea of creating 'Banga-mata' with his own daughter as inspiration. Nivedita inspired him to view and create it as 'Bharat Mata'. The painting became a landmark in the days of the nationalist movement.

Sister Nivedita, the inspiration behind the Bengal School of Art, praised the painting by saying:

From beginning to end, the picture is an appeal, in the Indian language, to the Indian heart. It is the first great masterpiece in a new style. I would reprint- it, if I could, by tens of thousands, and scatter it broadcast over the land, till there was not a peasant's cottage, or a craftman's hut, between Kedar Nath and Cape Comorin, that had not this presentment of Bharat-Mata somewhere on its walls. Over and over again, as one looks into its qualities, one is struck by the purity and delicacy of the personality portrayed.

Source: Wikipedia

Source: Sister Nivedita: Remembering An Indian Art Stalwart (news article)

Q.52 'Operation Sankalp' was initiated and implemented by the

- (a) Indian Air Force
- (b) Indian Army
- (c) **Indian Navy**

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(d) Ministry of Home Affairs

Answer: c

- **Operation Sankalp: Indian Navy's stealth Frigate, INS Talwar is presently deployed for Op Sankalp commemorating the 3rd continuous year of Indian Navy's presence in the Gulf for protection of India's Maritime Interests.**
- Union Home Minister and Minister of Cooperation inaugurated the **decommissioned INS Khukri as museum in Diu. INS Khukri (P49), the first indigenous missile corvette of the Indian Navy**, was transferred to the Diu Administration on January 26, 2022 after 32 years of glorious service to the nation and Navy, to be converted to a ship-museum.
- **The Army Training Command (ARTRAC) has announced to establish a 5G Testbed in association with the Indian Institute of Technology (IIT)-Madras at Military College of Telecommunication at Mhow in Indore, MP.**

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Reference: June 2022 Missioncapfhub Current Tit-Bits Magazine.

Q.53 Which one of the following statements is not true with regard to tribal welfare?

- (a) The Comprehensive Tribal Development Programme aims at land development activities, improvement of roof houses, infrastructure development and so on.
- (b) As per the Scheduled Tribes and Other Traditional Forest Dwellers Act, villages in forests are provided with community rights.
- (c) The Special Area Development Programme aims at distribution of forest area produces to the tribals equitably.**
- (d) The Special Central Assistance to Tribal Sub plan provides dairy cows to tribal groups living below the poverty line.

Answer: c

Explanation: **Special area programmes have been formulated to deal with the special problems faced by certain areas arising out of their distinct geo- physical structure and location and concomitant socio-economic development.**

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Q.54 Which one of the following statements is not correct?

- (a) The 'Swarna Jayanti Shahari Rozgar Yojana' is an urban self-employment programme.
- (b) The Drought-Prone Area Programme Desert Development and Programme were launched in 1970s.
- (c) The 'Sampoorna Grameen Rozgar was launched after Yojana' restructuring the 'Integrated Rural Development Programme' in 2001.**
- (d) The 'Swarna Jayanti Gram Swarozgar Yojana' is a rural self employment programme.

Answer: c

Explanation: Sampoorna Grameen Rozgar Yojana (SGRY) was launched on September 25, 2001 by merging the ongoing schemes of Employment Assurance Scheme (EAS) and the Jawahar Gram Samridhi Yojana (JGSY).

Reference: <https://pib.gov.in/newsite/erecontent.aspx?reid=1026>

Q.55 The battle of Rakshasi-Tangadi is popularly known as the

- (a) Battle of Talikota**
- (b) Battle of Khanwa
- (c) Battle of Panipat
- (d) Battle of Dharma

Answer: a

Explanation: In 1565 Rama Raya, the chief minister of Vijayanagara, led the army into battle at Rakshasi-Tangadi (also known as Talikota), where his forces were routed by the combined armies of Bijapur, Ahmadnagar and Golconda. The victorious armies sacked the city of Vijayanagara

Source: NCERT XIIth Theme in Indian History- Part 2. Pg no: 173

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Q.56 Ashokan inscriptions in Afghanistan are written in which one of the following scripts?

- (a) Brahmi
- (b) Sharada
- (c) Kharoshthi

(d) Greek-Aramaic

Answer: d

Explanation: Most Asokan inscriptions were in the Prakrit language while those in the northwest of the subcontinent were in Aramaic and Greek. Most Prakrit inscriptions were written in the Brahmi script; however, some, in the northwest, were written in Kharosthi. The Aramaic and Greek scripts were used for inscriptions in Afghanistan.

Source: NCERT XIIth Theme 1 Pg no: 32

Q.57 Which one of the following statements about coins struck during 200 BCE to 300 CE in the Indian subcontinent is not correct?

- (a) The Indo-Greeks introduced bilingual and bi-script legends on their coins.
- (b) The Kushanas minted large quantities of gold coins as well as copper coins of low denomination.
- (c) The Satavahanas issued coins of silver, copper, lead and potin.

(d) Absence of Negama coins suggests the declining power and authority of merchant guilds.

Answer: d

Explanation:

The Indo-Greeks introduced bilingual and bi-script legends on their die struck coins, and almost all our information on these kings comes from their coinage. The Kushanas minted large quantities of gold coins, as well as copper coins of low denominational value. In the Deccan, the Satavahanas issued coins of silver, copper, lead, and potin. A handful of negama (nigama) coins reflect the power and authority of merchant guilds.

Source: Upinder Singh

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

List -1

List -2

(Vedic name of river)

(Modern name)

A. Drishadvati

1. Chenab

B. Askini

2. Chautang

C. Vitasta

3. Ravi

D. Purushni

4. Jhelum

Code

ABCD

(a) 2413

(b) 2143

(c) 3142

(d) 3412

Answer: b

Explanation: Chautang is a tributary of Ghaggar River

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Rigvedic Name	Modern Name	Region
Sindhu	Indus	Punjab
Vitasta	Jhelum	Punjab
Asikani	Chenab	Punjab
Vipas	Beas	Punjab
Parushni	Ravi	Punjab
Satudri	Sutlej	Punjab
Saraswati	Sarsuti	Rajasthan
Drishadvati	Ghaggar	Rajasthan
Kubha	Kabul	Afghanistan
Suvastu	Swati	Afghanistan
Krumu	Kurram	Afghanistan
Gomati	Gomal	Afghanistan

Source: Lucent GK

Q.59 When was the Kothari Commission Appointed by the Government of India to look into the education sector of India?

- (a) 1967
- (b) 1966
- (c) 1965
- (d) 1964**

Answer: d

Explanation: An education commission was setup in 1964 under the chairmanship of Dr .D.S.Kothari..to advise the government on National pattern of education and recommend policies for the development of education at all levels.

Source..Niti aayog. Report on education

Q. 60 Which one of the following is not correct?

- (a) The Gulf Stream is a warm ocean current.
- (b) The North Atlantic Drift is a warm ocean current.
- (c) The Labrador Current is a cold ocean current.
- (d) The California Current is a warm ocean current.**

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Answer: (D)

Explanation: California Current is a cold ocean current. All the other statements are correct

Reference/source: NCERT- OUR ENVIRONMENT Page No. 57

Q.61 Which of the following statements about maps are correct?

1. Maps that maintain the true shapes of areas are known as conformal maps.
2. Maps are used to show spatial relationships.
3. Maps cannot show route from one place to another.

Select the correct answer using the code given below.

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

Answer: (c)

Explanation: If a map preserves shape, then feature outlines (like country boundaries) look the same on the map as they do on the earth. A map that preserves shape is conformal.

Reference: NCERT: Practical work in Geography, Page 36

Q.62 Which one of the following statements about 'great circle' is not correct?

- (a) Every great circle divides the Earth into equal halves.
- (b) Every great circle is a circumference of the Earth.
- (c) Great circles mark the longest travel routes between locations on the Earth's surface.**
- (d) Great circle is the largest circle that can be drawn around the Earth through two particular points.

Answer: (c)

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Explanation: The great circle path is the shortest path between two far locations. This is why pilots fly polar routes saving time and distance. Rest of the options are correct. Hence option (c) is incorrect.

Reference:

1. NCERT: PRACTICAL WORK IN GEOGRAPHY Page No 26
2. <https://gisgeography.com/great-circle-geodesic-line-shortest-flight-path/>

Q.63 Which one the following statement is correct with reference to normal lapse rate?

- (a) Temperature is highest at ground level and decreases with increasing altitude.**
- (b) Temperature is lowest at ground level and increases with increasing altitude.
- (c) Temperature remains stable with increasing altitude.
- (d) Temperature first increases with increasing altitude and gradually starts decreasing.

Answer: (a)

Explanation: The atmosphere is indirectly heated by terrestrial radiation from below. Therefore, the places near the sea-level record higher temperature than the places situated at higher elevations. In other words, the temperature generally decreases with increasing height. The rate of decrease of temperature with height is termed as the normal lapse rate. It is 6.5°C per 1,000 m.

Reference: NCERT- Fundamentals of Physical Geography Page no.- 82

Q.64 Which of the following is a tributary of the Brahmaputra River?

- (a) Ghaggar
- (b) Mahi
- (c) Kosi
- (d) Manas**

Answer: (d)

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Explanation: The Brahmaputra receives numerous tributaries in its 750 km long journey through the Assam valley. Its major left bank tributaries are the Burhi Dihing and Dhansari (South) whereas the important right bank tributaries are the Subansiri, Kameng, Manas and Sankosh.

Reference: NCERT- India: Physical Environment Page No. 26

Q.65 The landmark case of D. C. Wadhwa Vs State of Bihar in the Supreme Court is related to which one of the following powers of the Governor?

(a) To repromulgate ordinances

(b) To appoint a Chief Minister

(c) To grant pardon, etc.

(d) To revise the emoluments and allowances of the MLAs

Answer: a

Explanation: The supreme court observed In D.C.Wadhwa case(1987) that the re-promulgation of an ordinance is unconstitutional

Reference: Laxmikant President chapter.

Q.66 'Operation Flood' is also popularly known as

(a) The Green Revolution

(b) The White Revolution

(c) The Blue Revolution

(d) The Yellow Revolution

Answer: b

Explanation: Operation Flood is also known as **the White Revolution**. Operation Flood, launched on 13 January 1970, was the world's largest dairy development program and a landmark project of India's National Dairy Development Board (NDDB)

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Q.67 The 'Stand-Up India Scheme' is related to which one of the following issues?

- (a) Social security during old age
- (b) Providing technical knowhow to young, educated or skilled workers from rural areas
- (c) Promoting entrepreneurship amongst women, SC and ST communities**
- (d) Insurance cover to people in the age group of 18—50year.

Answer: c

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Welfare; and

5. In any financial year, the expenditure on such schemes of the MoHFW would be initially incurred from the PMSSN and thereafter, from **Gross Budgetary Support (GBS)**.

- **Centre of Excellence in gaming: Ministry of Information and Broadcasting is associating with IIT Bombay to form a Centre of Excellence in gaming.**
- **Stand Up India Scheme:** it is estimated that 81% of the account holders are women under this scheme.

About Stand Up India Scheme:

1. It was launched on **5 April 2016** to promote entrepreneurship at the grass-root level of economic empowerment and job creation.
2. It provides **institutional credit structure** to reach out to the underserved sector of people such as **SCs, STs and Women Entrepreneurs**.
3. **Objective:** to facilitate bank loans between Rs.10 lakh and Rs.1 crore to at least one SC or ST borrower and at least one woman borrower per bank branch for setting up a Greenfield enterprise.
4. The offices of **SIDBI and NABARD** shall be designated **Stand-Up Connect Centres (SUCC)**.
5. The scheme is anchored by **Department of Financial Services (DFS), Ministry of Finance, Government of India.**

Reference: March Missioncapfhub Current Tit-Bits Magazine

Q.68 Which one of the following is a feature of Indian federalism?

- (a) Courts can interpret Constitution and powers of different levels of the Government.
- (b) Sources of revenue for the Union Government and the State Governments are specified.
- (c) Powers of the Union and the 'States are specified in the Constitution.
- (d) Indian federalism is based on the principle of Separation of Power**

Answer: d

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Explanation: There are 7 basic features of Indian federalism - 1- The facility of Union government, state government, and local self government. 2- Division of powers under schedule 7, 3- The fundamental provisions of the constitution can not be changed unilaterally by any one level of the government, 4- Courts have the power to interpret the constitution and powers of different levels of the government. 5- sources of revenue for different tiers of the government are clearly specified to ensure financial autonomy. 6- Our federal system ensures unity in the country as well as regional diversity.

Source - NCERT class 10 on Democratic politics.. Chapter 2 - federalism

Q. 69 Consider the following statements:

1. The early Malwa school of paintings was influenced by Shirazi School while the early Mughal paintings initially followed Bihzad School.
2. The major exponents of Bihzad School in India were Sayyid Ali and Abdus Samad.

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

Answer: c

Explanation:

During the 15th century the Persian style of painting started influencing the Western Indian style of painting as is evident from the Persian facial types and hunting scenes appearing on the borders of some of the illustrated manuscripts of the Kalpasutra. Introduction of the use of ultra-marine blue and gold colour in the Western Indian manuscripts is also believed to be due to the influence of the Persian painting.

Shīrāz school, in Persian miniature painting

The Mughal style evolved as a result of a happy synthesis of the indigenous Indian style of painting and the Safavid school of Persian painting.

Babur had a keen eye for portraiture and this is also recorded in his memoirs. Among the artists, who find mention in Babur's memoirs is Bihzad.

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Both as a teacher and painter Behzād was a leading force in the development of Tabrīz as a centre of art. His students included the painters Qāsim ‘Alī, Mīr Sayyid ‘Alī....

Humayun brought back with him the master artists when he regained power in India. He invited two Persian artists — Mir Sayyid Ali and Abd us Samad to establish a studio in his court and carry out royal paintings

Source: NCERT Fine ARTs Class 12, CCRT, Britannica.com

Q. 70 Which of the following statements about 'Ek Bharat Shreshtha Bharat' programme is/are correct?

1. It was announced in the year 2014.
2. Its aim is to create an environment which promotes learning between the States by sharing best practices and experiences.

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: Ek Bharat Shreshtha Bharat was announced in 2015 on the occasion of the 140th birth anniversary of Sardar Vallabhbhai Patel.

The broad objectives of the initiative are:- (i) to celebrate the unity in diversity of our nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our country; (ii) to promote the spirit of national integration through a deep and structured engagement between all states and union territories through a year-long planned engagement between states; (iii) to showcase the rich heritage and culture, customs and traditions of either state for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity; (iv) to establish long-term engagements; and (v) to create an environment which promotes learning between the states by sharing best practices and experiences.

Source: India Year book 2022, chapter: 28

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Q.71 Consider the following statements

1. Mirage 2000 is a twin-engine fighter jet.
2. HAL Tejas is a delta-winged fighter jet.
3. Rafale is a hypersonic fighter jet

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 only**
- (c) 1 and 3
- (d) 3 only

Answer: b

Rafale is Supersonic not Hypersonic. Mirage 2000 is a single-engine fighter jet.

- **Rafale: Technical Specifications** - Rafale is a multi-role Combat Fighter jet. It is capable of conducting any type of sortie mission: **interdiction, aerial reconnaissance, air supremacy, close air support, ground support, in-depth strike, anti-ship strike and nuclear deterrence missions**. Fuel capacity: 4,700 kg for single-seater and 4,400 kg for double seater. Combat range: 1,850 km Maximum speed: Mach 1.8 (Mach number is the ratio of the speed of an aircraft to the speed of sound).

Q.72 Which one of the following aerospace companies designed and manufactured 'Falcon 9', a reusable rocket?

- (a) Blue Origin
- (b) Boeing
- (c) Lockheed Martin

(d) SpaceX

Answer: d

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- Skyroot Aerospace, a space technology startup based in Hyderabad, has successfully test-fired Dhawan-1, India's first privately developed fully cryogenic rocket engine. This will power the upper stages of its upcoming Vikram-2 orbital launch vehicle. The rocket engine Dhawan-1 is named after Satish Dhawan, an Indian rocket scientist.
- **Double Asteroid Redirection Test (DART):** NASA will launch the agency's first planetary defense test mission. The main aim of the mission is to test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course. The spacecraft will be launched on a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California.

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Reference: Nov 2021 Missioncapfhub Current Tit-Bits Magazine.

Q.73 The Kh-47M2 Kinzhal, a nuclearcapable hypersonic missile, belongs to which one of the following countries?

- (a) China
- (b) France
- (c) Russia**
- (d) US

Answer: c

- **Kinzhal hypersonic missiles:** Russia's defence ministry said that they have used its newest Kinzhal hypersonic missiles for the first time in Ukraine. The Kh-47M2 Kinzhal is a nuclear-capable hypersonic aero-ballistic air-to-ground missile. It has a claimed range of more than 2,000 km, Mach 10 speed.
- **Financial Action Task Force (FATF)** retained Pakistan in the grey list. FATF also added the United Arab Emirates (UAE) to its grey watchlist.
- Due to its war on Ukraine, **Russia** has become the most sanctioned in the world, according to a New York-based sanctions watchlist site Castellum.
- **Noor-2: Military satellite** Lunched by Iran's Islamic Revolutionary Guard Corps (IRGC).

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Reference: March 2022 Missioncapfhub Current Tit-Bits Magazine

Q.74 Mariupol city, frequently mentioned in news in the context of Russia-Ukraine conflict, is situated on the coast of

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- (a) Aral Sea
- (b) Baltic Sea
- (c) Caspian Sea
- (d) Sea of Azov**

Answer: (d)

Explanation: Current affairs based question-- Mariupol has long-been a strategically important port on the Sea of Azov, part of the Black Sea. With its deep berths, it is the biggest port in the Azov Sea region and home to a major iron and steel works.

Reference: Atlas

Q.75 Recently, with which one of the following countries did India sign the 'Comprehensive Economic Partnership Agreement'?

- (a) Egypt
- (b) Israel
- (c) South Africa
- (d) United Arab Emirates**

Answer: d

Explanation: The historic **India-UAE** Comprehensive Economic Partnership Agreement (CEPA) which was signed between the two nations on 18 February 2022, officially entered into force on 1 May 2022.

Reference: <https://pib.gov.in/PressReleasePage.aspx?PRID=1821785#:~:text=The%20historic%20India%20UAE%20Comprehensive,officially%20entered%20into%20force%20today.>

Q.76 Which one of the following is the oldest Central Paramilitary Force in India?

- (a) The Central Reserve Police Force
- (b) The Border Security Force
- (c) The Assam Rifles**
- (d) The Commando Battalion for Resolute Action

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Answer: c

Explanation: The Assam Rifles raised as Catchar Levy in 1835 is the oldest Central Para Military Force in India.

Source: India Year Book 2022, Chapter 6: Law and Justice

Q.77 Which of the following statements about 'Agency Houses' is/are correct?

1. They were important commercial formations in the late eighteenth and nineteenth century India.
2. The operation of managing agencies remained confined to Calcutta.

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: a

Explanation: The Agency Houses: British Mercantile Enterprise in the Far East c. 1780–1920 Of the sixty British managing agency houses operating in India in 1913 about a dozen were of substantial size. They declined in 20th century with decline of indigo cultivation. Hence statement 1 is correct.

Statement 2 is restrictive.

Other writers attribute its origins to the mercantile “agency houses” which flourished in Calcutta from 1793 until their failure in the eighteen thirties or to their successors, the agency houses of 1834 to 1847.⁴ Without citing specifics they skip to the period after 1860, by which time the system had fully matured.

It was, in fact, in the period from 1834 to 1847 that a type of business organization recognizable as managing agency took form. A mercantile agency house first assumed the duties of a managing agent in Calcutta in 1836. Other Calcutta agency houses followed their example and undertook the management of joint stock companies in the eighteen forties. Simultaneously, the system appeared in Madras,⁵ and by the eighteen fifties British houses in Calcutta, Madras, and Bombay were employed increasingly as local agents of companies organized in the British Isles.

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Source: Articles related to Agency Houses in Google

Q.78 Which one of the following statements about Tolkappiyam is not correct?

- (a) It is a treatise on grammar.
- (b) It was composed between first to fourth century CE.
- (c) It was part of the Sangam corpus.

(d) It was composed by Panini.

Answer: d

Explanation: The first two books of the Tolkappiyam (a book on Tamil grammar and poetics written by Tolkappiyar) are also a part of the corpus of Sangam Literature.

Source: Poonam Dalal Dahiya: Chapter 7/ can be solved using knowledge from Theme 2 NCERT

Q. 79 Which one Of the following statements about 'Princely States' in India is not correct?

- (a) The British Government declared that States were free to join either India or Pakistan or remain independent.
- (b) The decision to join either India or Pakistan or remain independent was left not to the people of Princely States but to the Princely Rulers.
- (c) The Ruler of Travancore first decided to remain independent.

(d) The State of Travancore finally joined India through a plebiscite.

Answer: d

Explanation: Travancore was one amongst the 5 princely states that decided to remain independent after 1947...But later Diwan of travancore C.P Ramaswamy Ayyar faced an assassination..which made him change his mind to join India.. Though it was done on his sole prerogative..Hence statement D is incorrect

Source - NCERT. Class 12- politics in India after independence. Chapter-1

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Q. 80 Which one of the following books was authored by Harshavardhana?

- (a) Harshacharita
- (b) Kadambari
- (c) Ratnavali**
- (d) Gitagovinda

Answer: c

Explanation: Harshavardhana, who ruled nearly 1400 years ago, was one such ruler. His court poet, Banabhatta, wrote his biography, the Harshacharita, in Sanskrit. Banabhatta's Kadambari Harshavardhana was very talented himself as it is believed that he wrote three dramas Priyadarshika, Ratnavali (both romantic comedies), and Nagananda (based on Bodhisattva Jimutavahana)

Gita Govinda, a piece of devotional literature composed on the theme of love between Radha and Krishna, by Jayadeva in Bengal under the Pala kings.

Source: Poonam Dalal Dahiya, Option1 can be eliminated using knowledge from Class 6 NCERT

Q. 81 The King of Dance' is a description of

- (a) Trimurti at Elephanta Caves
- (b) Kaliyamardan of Krishna
- (c) Bodhisattva Maitreya at Gandhara
- (d) Bronze Nataraja of the Cholas**

Answer: d

Explanation: Nataraja means 'Lord of the Dance'.

Q.82 Anasagar Lake is located in which one of the following States?

- (a) Gujarat
- (b) Uttarakhand

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(c) Rajasthan

(d) Karnataka

Answer: (c)

Explanation: Anasagar Lake is an artificial lake situated in the city of Ajmer in Rajasthan state in India. It was built by Arnoraja, the grandfather of Prithviraj Chauhan, in 1135 -1150 AD and is named after him. The catchments were built with the help of local populace. The lake is spread over 13 km.

Reference: Atlas

Q.83 The World Wetland Day is celebrated on which one of the following dates every year?

(a) 10th June

(b) 13th February

(c) 9th March

(d) 2nd February

Answer: d

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CURRENT TIT-BITS Initiative by MISSION CAPF HUB

IMPORTANT DATES & EVENTS

- **World Wetlands Day:** Feb 2. Theme: "Wetlands Action for People and Nature".
- **International Day of Human Fraternity:** Feb 4.

Reference: Feb 2022 Missioncapfhub Current Tit-Bits Magazine

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Q. 84 Ganga water is being shared at Farakka with which one of the following countries?

- (a) Nepal
- (b) Bhutan
- (c) Bangladesh**
- (d) Myanmar

Answer: (c)

Indo-Bangladesh Water Resources Cooperation

An Indo-Bangladesh Joint Rivers Commission (JRC) is functioning since 1972 with a view to maintain liaison in order to ensure most effective joint efforts in maximising the benefits from common river systems. A treaty was signed by the prime ministers of India and Bangladesh in 1996 for the sharing of the Ganga waters at Farakka during the lean season. As per the treaty, the **Ganga waters is being shared at Farakka** (which is the last control structure on river in India) during lean period, from 1st January to 31st May every year, on 10-daily basis as per the formula provided in the treaty. The validity of the treaty is 30 years.

Explanation: The Farakka Barrage Project was designed to serve the need of preservation and maintenance of the Kolkata Port by improving the regime and navigability of the Bhagirathi-

Reference: India year book

Q.85 Which one of the following is a part of Deccan Plateau?

- (a) Aravalli Hills
- (b) Karbi Anglong Hills**
- (c) Shivalik Hills
- (d) Vindhyan Hills

Answer: (b)

Explanation:

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Physiography

A significant geographical aspect of Assam is that it contains three of six physiographic divisions of India—the Northern Himalayas (eastern Hills), the Northern Plains (Brahmaputra Plain), and the Deccan Plateau (Karbi Anglong). As the Brahmaputra flows in Assam, the climate here is cold and there is widespread rainfall. The hills of Karbi Anglong, North Cachar and those in and close to

Reference: India year book

The Deccan Plateau is a triangular landmass that lies to the south of the river Narmada. The Satpura range flanks its broad base in the north, while the Mahadev, the Kaimur hills and the Maikal range form its eastern extensions. Locate these hills and ranges in the Physical map of India. The Deccan Plateau is higher in the west and slopes gently eastwards. An extension of the Plateau is also visible in the northeast, locally known as the Meghalaya, Karbi-Anglong Plateau and North Cachar Hills. It is separated by a fault from the Chotanagpur Plateau.

Reference: NCERT - Contemporary India-1 Page No. 12

Q.86 In which one of the following States, more than 50% area is under Jhum cultivation?

- (a) Manipur
- (b) Assam
- (c) Sikkim
- (d) Mizoram**

Answer: d

Explanation: About 60 per cent of the people of the state are engaged in agricultural and allied activities. The main pattern of the agriculture followed is jhum or shifting cultivation. Of the total 21 per cent is put on paddy/seasonal crops. About 63 per cent of the total crop area is under jhum cultivation.

Manipur and Tripura have only about 10 per cent of their jhumming land under crops in agricultural year. sikkim and assam can be eliminated. As high as 63 percent of the total crop area is under jhum cultivation in Mizoram.

Reference: India year book

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Q.87 'Dhivehi' is a principal language of which one of the following Union Territories?

- (a) Puducherry
- (b) Ladakh
- (c) Lakshadweep**
- (d) Jammu and Kashmir

Answer: (c)

Explanation: Maldivian, also known by its endonym Dhivehi or Divehi, is an Indo-Aryan language spoken in the South Asian island country of Maldives and on Minicoy Island, Lakshadweep, union territory of India. The Maldivian language has notable dialects.

Lakshadweep

<i>Area</i> : 32 sq. km	<i>Population</i> : 64 thousand (census 2011)
<i>Capital</i> : Kavaratti	<i>Principal Languages</i> : Malayalam, Dhivehi (language of Maldives)
<i>Administrator</i> : Praful Patel	
<i>Jurisdiction of High Court</i> : Falls under Jurisdiction of Kerala High	

Reference: India year book

Q.88 Which of the following is/are source/ sources of Law in India?

1. Constitution of India
2. Statutes
3. Customary Law
4. Case Law

Select the correct answer using the code given below.

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

Answer: d

Explanation: The fountain source of law in India is **the Constitution** which, in turn, gives due recognition to **statutes, case law** and **customary law** consistent with its dispensations. Statutes are enacted by Parliament, State Legislatures and Union Territory Legislatures

Indian Legal System

The Indian Legal System comprises four components namely the basic values and principles enshrined in the Constitution; rights and obligations conferred by ordinary statutes; organisational set-up to enforce these rights and obligations within the Constitutional norms; and lastly the legal and judicial personnel. India being a democratic country and there being a representative democracy there is a chain of accountability towards sovereign which lies amongst the people.

Sources of Law

The main sources of law in India are the Constitution, Statutes (legislation), Customary Law and Case Law. Statutes are enacted by the Parliament, state legislatures and union territory legislatures. Besides, there is a vast body of laws known as subordinate legislation in the form of rules, regulations as well as bye-laws made by central/state governments and local authorities like municipal corporations, municipalities, gram panchayats and other local bodies. This subordinate

Reference: India year book

Q. 89 Which among the following is/are the function/ functions of the Cabinet Secretariat?

1. To ensure inter-ministerial coordination
2. Management of major crisis situations in the country

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2**

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(d) Neither 1 nor 2

Answer: c

Explanation:

government by ensuring adherence to these rules. It assists in decision-making by ensuring **inter-ministerial coordination**, ironing out differences amongst ministries/departments and evolving consensus through the instrumentality of the standing and ad hoc Committees of Secretaries. The Cabinet Secretariat ensures that the President, the

Vice-President and the ministers are kept informed of the major activities of all ministries/departments by means of monthly summary of their activities. **Management of major crisis situations** in the country and coordinating activities of various ministries in such a situation is also one of the functions of the Cabinet Secretariat. The Secretaries keep the Cabinet Secretary informed of developments from time to time. The Transaction of Business Rules also require them to keep the Cabinet Secretary informed specially if there are any departures from these rules.

Reference: India year book

Q.90 Which of the following statements about the Committee on Public Undertakings is/are correct?

1. There are more members from the Rajya Sabha than the Lok Sabha in the Committee.
2. The Chairperson of the Committee is appointed by the Speaker of the Lok Sabha.

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

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Answer: b

Explanation: The committee on public undertakings is one of the three finance committees..It examines the report of CAG on public undertakings..It has 22 members ..15 from Lok sabha and 7 from Rajya sabha..Hence statement 1 is wrong... The chairman of the committee is appointed by the speaker from amongst its members who belong to lok sabha only..Hence state 2 is correct

Source - Laxmikanth. Chapter- Parliamentary committees

Q. 91 Which one of the following statements is not correct?

- (a) A censure motion can be moved against a single Minister of the Council of Ministers.
- (b) A motion of no-confidence cannot be moved against the Prime Minister alone.
- (c) A censure motion cannot be moved against the entire Council of Ministers.**
- (d) 'A censure motion can be moved against a group of Ministers.

Answer: c

Explanation:

A censure motion refers to the condemnation that the opposition parties raise against the ruling government for its functioning or policies .It does not need any reason for its adoption and can be moved against an individual minister or a group of ministers or the entire council of ministers..Hence state 3 is not correct

Source- Laxmikanth. Chapter- Parliament

Q. 92 Which one of the following is not a thrust area of the 'Atal Mission for Rejuvenation and Urban Transformation (AMRUT)'?

- (a) Water supply
- (b) Storm water drainage to reduce flooding
- (c) Motorized urban transport and capacity building**
- (d) Green spaces and park

Answer: c

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3 correct options covered. Amrut scheme promote Non-motorised Transport.

REPORTS/COMMITTEEG /INDEX/SURVEY/STUDY

- RBI to set up an **Expert Committee chaired by K. V. Kamath** to suggest financial parameters for resolution of Covid-19 related stressed assets.
- **One in every Three Child are Poisoned by Lead: UNICEF Report = World's one-third child population** which is nearly around 800 million are affected by lead poisoning. Among the total affected **nearly half of them are from South Asia**. India accounts for nearly 275,561,163 of these cases.
Lead is a potent neurotoxin which harms the **brains of small children** irreparably even before they are allowed a chance to develop. This severe harm can lead to lifelong cognitive, neurological and physical impairment.
- **"Elephants. Not Commodities" Report = by the International Animal Welfare Organization.** According to the report, over 200 elephants in India are kept in severe inadequate conditions. According to the report, **India is home to second-highest number of elephants used in tourism in Asia.**
- **The Ministry of Housing and Urban Affairs** recently released ranking of states under **AMRUT** scheme. **Odisha has secured first position** by scoring 85.67%. **AMRUT is Atal Mission for Rejuvenation and Urban Transformation Scheme.** The scheme aims to provide piped water supply to households in urban areas of the state. It also aims at construction of sewerage treatment plants and improving green spaces in the cities.

Reference: May 21 Missioncapfhub Current Tit-Bits Magazine.

Q. 93 Nowadays, 'non fungible tokens' are talked about in the context of

- (a) **Digital assets on a blockchain**
- (b) Operations of 'banking correspondents' in rural areas
- (c) Multifactor authentication security requirement in banking transactions
- (d) Transactions through 'small finance banks'

Answer: a

- **Union Home Minister Amit Shah** lays foundation stone for **tribal freedom fighters museum at Luangkao village in Manipur's Tamenglong district.**
- **President Kovind** addresses **centenary celebrations of Harcourt Butler Technical University in Kanpur.** Harcourt Butler Technical University (HBTU) is a premier State Technical University situated at Kanpur. The HBTU was named after Sir Spencer Harcourt Butler, Governor of the United Provinces in British India.
- **Collins Dictionary** picks **NFT (short for non-fungible token)** as word of the year after rise in its usage. **NFT** is short for non-fungible token. **Collins defines it as a unique digital certificate, registered in a blockchain, that is used to record ownership of an asset such as an artwork or a collectible.**

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Reference: Nov 2021 Missioncapfhub Current Tit-Bits Magazine.

Q. 94 The term 'Sagittarius A*', sometimes mentioned in news, refers to

- (a) **A super massive black hole in our Milky Way Galaxy**
- (b) Two giant black holes spiraling around each other several light years away from the Earth
- (c) A Supernova explosion seen in real time for the first time ever by scientists
- (d) A huge asteroid that passed by very close to the Earth

Answer: a

Explanation: **Sagittarius A*** is a Supermassive black hole at the center of the Milky Way.

Source: https://www.nasa.gov/mission_pages/chandra/multimedia/black-hole-SagittariusA.html

Q. 95 Consider the following statements with reference to the latest guidelines issued by the Indian Computer Emergency Response Team (CERT-In):

1. Data centres and service providers shall compulsorily report cyber security breaches within 24 hours.
2. Virtual Private Network providers shall retain user data for at least five years and share records with authorities when required.

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

Answer: b

Explanation: While many other developed countries expect the incidents to be reported in 48-72 hours, CERT-In has given a very aggressive time frame of 6 hours for reporting incidents.

CERT-In has provided a list of data points that needs to be maintained by Virtual Private Network Service (VPN Service) providers for a period of 5 years or more.

Source: <https://www.cert-in.org.in/Directions70B.jsp>

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Q. 96 The principle of common but differentiated and responsibilities respective capabilities', often talked about in media, refers to

- (a) WHO's COVID- 19 Global Vaccination Drive
- (b) Contributions to the International Monetary Fund
- (c) Reduction of greenhouse gas emissions**
- (d) Contributions to the United Nations Peacekeeping Operations

Answer: c

Explanation: Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a principle within the United Nations Framework Convention on Climate Change (UNFCCC) that acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.

Q. 97 With reference to Indian economy, the term 'bad bank', frequently mentioned in news, refers to

- (a) An asset reconstruction company**
- (b) An asset management company
- (c) A bank with huge 'nonperforming assets'
- (d) a bank that has become insolvent

Answer: a

an indo-China border road.

State Bank of India's Padmakumar M Nair named as CEO of National Asset Reconstruction Company (NARCL)

About NARCL:

1. It is a proposed entity for taking over bad loans of lenders, predominantly public sector banks.
2. It is also called a 'bad' bank, is expected to be operational in June 2021.
3. The plan is to create a bad bank to house bad loans of 500 crore and above, in a structure that will contain an asset reconstruction company (ARC) and an asset management company (AMC) to manage and recover dud assets.
4. The new entity is being created in collaboration with both public and private sector banks.

Reference: May Missioncapfhub Current Tit-Bits Magazine

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Q. 98 Which one of the following was not a feature of the art of painting in India in the 19th century?

- (a) Art was being produced for the open market.
- (b) The artist (Shilpi) became distinct from the artisan (Karigar).
- (c) The technique of oil painting was developed.
- (d) The distinction between elite and popular art widened.**

Answer: d

Explanation:

In the nineteenth century a new world of popular art developed in many of the cities of India. Village artists settled in the city in the hope of new patrons and new buyers of their art.

Popular prints were not painted only by the poor village Kalighat patuas. Often, middle-class Indian artists set up printing presses and produced prints for a wide market. They were trained in British art schools in new methods of life study, oil painting and print making.

Colonial rule introduced several new art forms, styles, materials and techniques which were creatively adapted by Indian artists for local patrons and markets, in both elite and popular circles.

Many of these Kalighat pictures were printed in large numbers and sold in the market. These prints could therefore be sold cheap in the market. Even the poor could buy them.

10

The Changing World of Visual Arts

When you look at a work of art – a painting, sculpture, etc. – it may not be obvious that like most other things, art too is influenced by the world around it. You may not realise that what you see also shapes your own ideas. In this chapter we will be looking at the changes in the world of visual arts during the colonial period, and how these changes are linked to the wider history of colonialism and nationalism.

Colonial rule introduced several new art forms, styles, materials and techniques which were creatively adapted by Indian artists for local patrons and

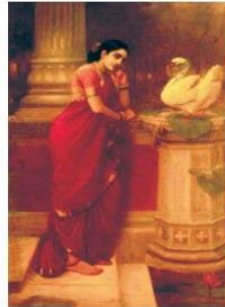


Fig. 1 – Damayanthi, painted

Source: NCERT class 8

Q. 99. As part of the Look/Act East Policy, which one of the following capitals of North-East Indian States is proposed to be connected with Bangladesh via rail route?

- (a) Agartala
- (b) Kohima
- (c) Imphal
- (d) Itanagar

Answer: (a)

Explanation: As part of Act East Policy, the 15.6-km-long railway link will connect Gangasagar under Akhaura sub-division of Brahmanbaria district of Bangladesh with Nischintapur in India, and from there to Agartala station

Reference: TRIPURA PLANNING WEBSITE

https://planning.tripura.gov.in/sites/default/files/Tripura_Act%2520East%2520Policy%2520%2528Modified%2529.pdf&ved=2ahUKEwjY0JTe9LT5AhWIRmwGHVapCBYQFnoECA4QAQ&usg=AOvVaw0AAyzB4Z6lo36p8ATqLIE

Q. 100 Which one of the following is correct in respect of the appointment of District Judges?

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- (a) They are appointed by the Chief Justice of the concerned High Court.
- (b) They are appointed by the President of India on the advice of the Chief Justice of the concerned High Court.
- (c) They are appointed by the Governor in consultation with the High Court of the concerned State.**
- (d) They are appointed by the Supreme Court on the advice of the concerned High Court.

Answer: c

Explanation: Article 233 of the constitution deals with the provision of district judges..Any person who has been an advocate or a pleader for seven years, and is not in the service of the central or the state government is eligible to be a district judge..He is appointed and promoted by the governor of the state in consultation with the high court of the concerned state. Hence statement C is correct.

Source - Laxmikanth. Chapter - Subordinate courts

Q. 101 Consider the following historical events in India carefully.

1. The Indian press failed to protest against the Vernacular Press Act of 1878.
2. The Vernacular Press Act of 1878 was introduced by Viceroy Lytton against the counsel of his own Law Member.

Which of the above is/ are correct?

- (a) 1 only
- (b) 2 only**
- (c) Both 1 and 2
- (d) Neither I nor 2

Answer: b

Explanation:

There was strong opposition to the act, and finally Ripon repealed it in 1882. Hence Statement is Wrong. By far the most vicious attack on the educated Indians came from Lord Lytton who came to India as viceroy in 1876. He passed in 1878, against the advice of his own law member, the Vernacular Press Act, designed basically to gag the Indian press, which had become critical of the colonial policies.

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who came to India as viceroy in 1876. He passed in 1878, against the **advice of his own law member**, the Vernacular Press Act, designed basically to gag the Indian press, which had become critical of the colonial policies. The act provided for a deposit from all printers and publishers of regional language newspapers, which was

Source: Spectrum and SEKHAR BANDYOPADHYA

Q. 102 Which of the following pairs of years and historical events is correctly matched?

(a) 1878: Second Anglo-Afghan War

(b) 1885: Ilbert Bill Controversy

(c) 1785: Fox's India Bill

(d) 1898: Lord Curzon becomes the Viceroy

Answer: a

Explanation: Second Afghan War (1878–80)

In 1883, there was a furore over the attempt by the government to introduce the Ilbert Bill. (NCERT Class 8)

1783 Fox's India bills(SEKHAR BANDYOPADHYA)

Lord Curzon 1899–1905(Spectrum)

Sources: Spectrum, SEKHAR BANDYOPADHYA

Q.103 Which of the following sets of Indian States are landlocked and do not have an international boundary?

(a) Andhra Pradesh, Chhattisgarh, Haryana, Jharkhand and Madhya Pradesh

(b) Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh and Telangana.

(c) Chhattisgarh, Haryana, Himachal Pradesh, Madhya Pradesh and Telangana.

(d) Andhra Pradesh, Chhattisgarh, Haryana, Himachal Pradesh and Madhya Pradesh.

Answer: (b)

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Explanation: In India, there are 20 landlocked states. Of these, five do not have an international boundary. A landlocked state is a state entirely enclosed by land or whose coastlines lie on closed seas. The 5 states are Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, and Telangana.

Reference: Atlas

Q. 104 . Arrange the following passes from West to East direction:

1. Bara Lacha La
2. Shipki La
3. Jelep La
4. Bomdi La

Select the correct answer using the code given below.

- (a) 1-2-3-4
- (b) 1-3-2-4
- (c) 2-3-4-1
- (d) 2-4-3-1

Answer: (a)

Explanation: Bara Lacha La and Shipkila are in Himachal Pradesh. Jelep La is in sikkim and Bomdi la is in arunachal pradesh. Thus arranging from west to east the correct option would be 1-2-3-4

REFERENCE: 1. NCERT- CONTEMPORARY INDIA-1 Page No. 8, figure 2.1

2.ATLAS

Q.105 Which of the following statements is/are correct?

1. The jet streams are high altitude easterly winds.
2. El Niño is a warm ocean current.
3. El Niño appears along the Peru coast.

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Select the correct answer using the code given below.

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (b)

Explanation: The upper air circulation in this region is dominated by a westerly flow. An important component of this flow is the jet stream. These jet streams are located approximately over 27°-30° north latitude, therefore, they are known as subtropical westerly jet streams. Hence statement (a) is wrong, by elimination correct option is (b).

Reference: NCERT- Class 9 Social Science Chapter 4 Page No.28

Q.106 Match List-I with List-II and select the correct answer using the code given below the Lists :

A. Bhabar. 1. Marsh

B. Bhangar 2. Silt

C. Khadar. 3. Gravels

D. Delta. 4. Kankar

Code

ABCD

(a) 3241

(b) 3421

(c) 1423

(d) 1243

Answer: (b). A-3 B-4 C-2 D-1

Explanation: The largest part of the northern plain is formed of older alluvium. It lies above the floodplains of the rivers and presents a terrace- like feature. This part is known as bhangar. The

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soil in this region contains calcareous deposits, locally known as kankar. The newer, younger deposits of the floodplains are called khadar. They are renewed almost every year and so are fertile, thus, ideal for intensive agriculture.

Reference: NCERT- CONTEMPORARY INDIA -1 Page No. 11,12

Q.107 A non-banking financial cannot

- (a) Give loans
- (b) Make investments
- (c) Borrow from bank
- (d) Seek demand deposits from public and cannot issue cheques**

Answer: d

Explanation: NBFC cannot **accept demand deposits**; ii. NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself.

Source:

<https://www.rbi.org.in/Scripts/FAQView.aspx?Id=92#:~:text=NBFC%20cannot%20accept%20demand%20deposits,iii>.

Q.108 The Swaran Singh Committee recommended the insertion of which one of the following provisions into the Constitution of India?

- (a) Doctrine of Pleasure
- (b) Fundamental Duties**
- (c) Nomination of Anglo-Indian Members to the Lok Sabha
- (d) Impeachment of the President of India

Answer: b

Explanation: Article 51A of the constitution deals with a set of duties known as Fundamental duties..These were not the part of original constitution and were added by the 42nd amendment act in 1976 by the recommendation of Swaran Singh Committee.

Source - Laxmikanth..Chapter- Fundamental duties

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Q.109 The proceeds from disinvestment are included as

- (a) Non-tax revenue
- (b) Revenue receipts
- (c) Capital receipts**
- (d) Tax revenue

Answer: c

Explanation: **Capital Receipt-** includes proceeds from disinvestment in public sector undertakings, Recovery of loans etc.

Table 5.1: Receipts and Expenditures of the Central Government, 2020-21 (PA)

	(As per cent of GDP)
1. Revenue Receipts (a+b)	9.0
(a) Tax revenue (net of states' share)	7.3
(b) Non-tax revenue	1.7
2. Revenue Expenditure of which	11.7
(a) Interest payments	3.1
(b) Major subsidies	1.0
(c) Defence expenditure	0.9
3. Revenue Deficit (2-1)	2.7
4. Capital Receipts (a+b+c) of which	4.5
(a) Recovery of loans	0.1
(b) Other receipts (mainly PSU ¹ disinvestment)	0.9
(c) Borrowings and other liabilities	3.5
5. Capital Expenditure	1.8
6. Non-debt Receipts [1+4(a)+4(b)]	10.0
7. Total Expenditure [2+5=7(a)+7(b)]	13.5
(a) Plan expenditure	-
(b) Non-plan expenditure	-
8. Fiscal deficit [7-1-4(a)-4(b)]	3.5
9. Primary Deficit [8-2(a)]	0.4

Source: Economic Survey, 2020-21

¹ Public Sector Undertaking

Reference: 12th Macro-economic -5th chapter.

Q.110 GST is a/an

- (a) destination-based consumption tax**
- (b) origin-based production tax
- (c) destination-based sales tax on transaction sales
- (d) origin-based tax on transaction

Answer: a

Explanation:

Box 5.3: GST: One Nation, One Tax, One Market

Goods and Service Tax (GST) is the single comprehensive indirect tax, operational from 1 July 2017, on supply of goods and services, right from the manufacturer/ service provider to the consumer. It is a **destination based consumption tax** with facility of Input Tax Credit in the supply chain. It is applicable throughout the country with one rate for one type of goods/service. It has amalgamated a large number of Central and State taxes and cesses. It has replaced large number of taxes on goods and services levied on production/ sale of goods or provision of service.

As there have been a number of intermediate goods/services, which were manufactured/provided in the economy, the pre GST tax regime imposed taxes not on the value added at each stage but on the total value of the commodity/service with minimal facility of utilisation of Input Tax

Reference: Reference: 12th Macro-economic -5th chapter.

Q. 111 In the first quarter of fiscal year 2020-21, GDP contracted by 23.9 percent and in the second quarter, by 7.5 percent. The Economic Survey, 2020—21 preferred to call it a recovery in

- (a) U-shape
- (b) V-shape**
- (c) K-shape
- (d) W-shape

Answer: b

economic language for goods.

- The Finance Ministry's latest Monthly **Economic Review report** stated that the Indian Economy is witnessing a **V-shaped recovery**:
 1. A **V-shaped recovery** is a type of economic recession and recovery that resembles the shape of alphabet V in charting.
 2. A **V-shaped** recovery involves a **sharp revival of the economy** to the previous peak after a sharp decline.
 3. Such recoveries are resultant of an **economic stimulus offered by the Government** and easy money policy perused by the Central Bank.
 4. The recovery in V shaped curve witnesses **improved production levels and strong consumer demand**.

Reference: Feb Missioncapfhub Current Tit-Bits Magazine.

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Q.112 Based on the scoring on SDG (Sustainable Development Goals) India Index, the NITI Aayog has classified various States into certain categories. Which one of the following is not one of the categories?

- (a) Aspirants
- (b) Performers
- (c) Fast runners**
- (d) Achiever

Answer: c

REPORTS /INDEX/SURVEY/STUDY

➤ **The 3rd edition of Sustainable Development Goals (SDG) India Index 2020-21:** Released by NITI Aayog.

Key highlights:

1. **Kerala** has retained the top rank with a score of **75** while **Bihar** has been adjudged as the worst performer with a score of 52.
2. Both **Himachal Pradesh and Tamil Nadu** took the second spot with a score of 74.
3. **Chandigarh** too maintained its **top spot among the UTs** with a score of 79.
4. **Mizoram, Haryana, and Uttarakhand** are the **top gainers in 2020-21** in terms of improvement in score from 2019.

About SDG India Index 2020-21:

1. It is developed in collaboration with the **United Nations in India**, tracks the progress of **all states and UTs** on 115 indicators that are aligned to **Ministry of Statistics and Program Implementation's (MoSPI's) National Indicator Framework (NIF)**.
2. The SDG India Index **computes goal-wise scores on the 16 SDGs** for each State and Union Territory.
3. States and Union Territories are classified in **four categories** based on their SDG India Index score: **Aspirant (0–49)**, **Performer (50–64)**, **Front-Runner (65–99)**, **Achiever (100)**.

Q.113 Who among the following is credited with the introduction and popularization of Dhrupad form of music?

- (a) Raja Man Singh Tomar of Gwalior**
- (b) Tansen
- (c) Naik Gopal
- (d) Shaikh Bahauddin of Barnawa

Answer: a

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Explanation: During these centuries we meet the most respected and renowned singers and patrons of this form. There was Man Singh Tomar, the Maharaja of Gwalior. It was he who was mainly responsible for the enormous vogue of dhrupad.

Source: CCRT

Q.114 Who among the following is the author of the famous partition narrative, The Other Side of Silence?

- (a) Amrita Pritam
- (b) Urvashi Butalia**
- (c) Saadat Hasan Manto
- (d) Manju Kapur

Answer: b

Explanation: Urvashi Butalia. 1998. The Other Side of Silence: Voices from the Partition of India.

Source: 12th NCERT Themes 3: Pg no - 404

Q.115 Which one of the following cities the banks of Ganges declined importance when the railway link Bombay started operating?

- (a) Benaras
- (b) Kanpur
- (c) Mirzapur**
- (d) Patna

Answer: c

Explanation: Mirzapur on the Ganges, which specialised in collecting cotton and cotton goods from the Deccan, declined when a railway link was made to Bombay

Source: 12th NCERT Themes 3: Pg no - 323

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Q.116 When was the first all India census attempted?

(a) 1871

(b) 1872

(c) 1881

(d) 1861

Answer: b

Explanation: The first all-India census was attempted in 1872. Thereafter, from 1881, decennial (conducted every ten years) censuses became a regular feature.

Source: 12th NCERT Themes 3: Pg no – 321

Q.117 Consider the following statements about the seaports in India :

1. There are 4 major and 25 minor seaports in India.
2. The major ports are under the administrative control of the Ministry of Ports, Shipping and Waterways.
3. The minor ports are under the jurisdiction of respective State Maritime Board/State Government.

Which of the statements given above s/are correct?

(a) 1, 2 and 3

(b) 3 only

(c) 1 and 2 only

(d) 2 and 3 only

Answer: (d)

Explanation: At present, India has 12 major ports and 200 minor or intermediate ports. In case of the major ports, the central government decides the policy and plays regulatory functions. The minor ports are there whose policy and functions are regulated by state governments. The major ports handle larger share of the total traffic. There are 12 major ports so statement 1 is incorrect. Rest two options are correct

Reference:

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1.NCERT: People and economy Page No. 128

2.<https://journalsofindia.com/major-ports-of-india/>

Q.118 Match List—I with List—II and select the correct answer using the code given below the Lists :

List -1

List -2

((Regional block)

((Headquarters)

A. ASEAN

1. Brussels

B. CIS

2. Vienna

C. EU

3. Minsk

D. OPEC

4. Jakarta

Code

ABCD

(a) 4312

(b) 4132

(c) 2134

(d) 2314

Answer: a

Explanation: **ASEAN –Jakarta, The Commonwealth of Independent States (CIS) - Minsk, Belarus, European Union - Brussels, Belgium and Organization of the Petroleum Exporting Countries (OPEC) - Vienna, Austria.**

Q.119 Solifluction is a geomorphic process involving a special type of that is noticed in

(a) Desert regions

(b) Karst regions

(c) Permafrost regions

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(d) Savanna regions

Answer: (c)

Explanation: Solifluction, flowage of water-saturated soil down a steep slope. Because permafrost is impermeable to water, soil overlying it may become oversaturated and slide downslope under the pull of gravity. Soil that has been opened and weakened by frost action is most susceptible. solifluction which involves slow downslope flowing soil mass or fine grained rock debris saturated or lubricated with water. This process is quite common in moist temperate areas where surface melting of deeply frozen ground and long continued rain respectively, occur frequently. When the upper portions get saturated and when the lower parts are impervious to water percolation, flowing occurs in the upper parts.

Reference:

1.NCERT: Fundamentals of Physical Geography Page No. 52

2.<https://www.britannica.com/science/solifluction>

Q.120 Which one of the following geologic time periods is associated with the first appearance of the marsupials?

(a) Lower Cretaceous

(b) Upper Cretaceous

(c) Early Jurassic

(d) Middle Jurassic

Answer: (a)

Explanation: As far as paleontologists can tell, the distant ancestors of modern opossums diverged from the distant ancestors of modern placental mammals about 160 million years ago, during the late Jurassic period (when pretty much all mammals were the size of mice), and the first true marsupial appeared during the early Cretaceous, about 35 million years later

Reference: <https://www.thoughtco.com/150-million-years-of-marsupial-evolution-1093321>

Q.121 Which of the following statements about the Border Roads Organization (BRO) is/are correct?

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1. BRO is concerned with the construction and maintenance of roads in strategically sensitive areas.

2. BRO undertakes snow clearance in high altitude areas.

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: c

Explanation: It is concerned with construction and maintenance of roads in strategically sensitive areas like constructed the world's highest road from Manali (Himachal Pradesh) to Leh (in Kashmir). BRO undertakes snow clearance in high altitude areas and construction of airfields, buildings and permanent bridges.

Q.122 Which among the following countries is not a member of the North Atlantic Treaty Organization (NATO)?

(a) Hungary

(b) Poland

(c) Belarus

(d) Turkey

Answer: c

Turkey can be eliminated and Poland and Hungary- members of European union.

Belarus can be eliminated as Belarus is close Allie of Russia.

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- **Finland and Sweden** submitted a joint application to join **NATO** as Russia's invasion of Ukraine forces a dramatic reappraisal of security in Europe.
- About The North Atlantic Treaty Organization (NATO):**
1. It is an **alliance of 30 countries** that border the North Atlantic Ocean. The Alliance includes the United States, most European Union members, the United Kingdom, Canada, and Turkey.
 2. It is headquartered at **Brussels, Belgium**
 3. It was formed in the **wake of World War II** to keep the peace and encourage political and economic cooperation on both sides of the Atlantic Ocean.
 4. It is funded by its members. The U.S. contributes roughly three-fourths of **NATO's** budget.
 5. The founding members of **NATO** signed the **North Atlantic Treaty on April 4, 1949**.
 6. It worked in conjunction with the **United Nations, the World Bank, and the International Monetary Fund**.

Reference: May 2022 Missioncapfhub Current Tit-Bits Magazine.

Q.123 Which of the following statements is/are correct?

1. The 15th ASEAN-India Summit was held virtually in March 2022.
2. European Union is India's largest regional trading partner.

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

15th ASEAN -India Summit was held in 2017. (Covered in last year magazine)

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a rules-based multilateral order with the United Nations (UN) and the World Trade Organisation (WTO) at its core. The EU continues to be India's largest regional trading partner while India is the EU's 9th largest trading partner. India's bilateral trade in goods with the EU in 2018 stood at 91.5 billion Euros (USD 107.97 billion) comprising India's exports to the EU at 45.8 billion Euros (USD 54.0 billion) and imports at 45.7 billion Euros (USD 53.9 billion).

Reference: India year book.

Q.124 What is the term of office of the Chairperson and Members of the National Human Rights Commission?

- (a) 5 years or up to 70 years of age
- (b) 3 years or up to 70 years of age**
- (c) 5 years or up to 65 years of age
- (d) 3 years or up to 65 years of age

Answer: b

Explanation: National human rights commission is a statutory body, established in 1993 by the parliament. The commission is the watchdog of human rights in the country. In the original act, the chairman and the members hold office for a term of five years or until they attain the age of 70 years. However it was amended in 2019, which reduced the term to 3 years or until they attain the age of 70 years.

Source - Laxmikanth..6th edition ..chapter -55.

Q.125 Which of the following sets of nations are members of the BIMSTEC Initiative?

- (a) Bangladesh, Bhutan, Nepal, India and Sri Lanka
- (b) Bangladesh, Bhutan, Nepal, India, Sri Lanka, Thailand and Myanmar**
- (c) Bangladesh, Bhutan, Nepal, India, Sri Lanka and Maldives
- (d) Bangladesh, Bhutan, Nepal, India, Myanmar, Sri Lanka and Indonesia

Answer: b

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- 5th **BIMSTEC** Summit, Sri Lanka: Main outcome of summit was the **BIMSTEC** Charter's adoption and signing. This charter formalizes the **BIMSTEC** grouping into an organization that will have a flag, an emblem, and formally listed principles that are to be adhered to by the member nations. **Theme**- "Towards a Resilient Region, Prosperous Economies, Healthy People".
- About **BIMSTEC** (The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation):
1. It is an **international organisation** of seven South Asian and Southeast Asian nations like Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar and Thailand.
 2. It was established in 1997 through the **Bangkok Declaration**.
 3. **Secretariat** – Dhaka, Bangladesh.

Reference: March 2022 Missioncapfhub Current Tit-Bits Magazine