



BPSC PRELIMS

CIVIL SERVICE EXAM

2011

- 1** In which country is 'Takla Makan' desert situated?
(a) Kazakhstan (b) Turkmenistan
(c) Uzbekistan (d) China
- 2** Which strait connects Red Sea and the Indian Ocean?
(a) Bab-el-Mandeb (b) Hormuz
(c) Bosphorus (d) Malacca
- 3** Where is 'Ninety East Ridge' situated?
(a) Pacific Ocean (b) Indian Ocean
(c) Atlantic Ocean (d) Arctic Ocean
- 4** Which of the following is not a capital city?
(a) Canberra (b) Sydney
(c) Wellington (d) Riyadh
- 5** The highest coal-producing country in the world is:
(a) India (b) USA (c) China (d) Russia
- 6** Folding is the result of:
(a) Epeirogenetic force (b) Coriolis force
(c) Orogenetic force (d) Exogenetic force
- 7** Amritsar and Shimla are almost on the same latitude, but their climatic difference is due to:
(a) The difference in their altitudes
(b) Their distance from the sea
(c) Snowfall in Shimla
(d) Pollution in Amritsar
- 8** Coal mines in Jharkhand are located at:
(a) Jharia (b) Jamshedpur
(c) Ranchi (d) Lohardaga
- 9** Major source of oceanic salinity is:
(a) Rivers (b) Land
(c) Wind (d) Ash from volcanoes
- 10** The States (in terms of largeness) of India in the correct order are:
(a) Rajasthan, Madhya Pradesh, Maharashtra
(b) Madhya Pradesh, Rajasthan, Maharashtra
(c) Maharashtra, Rajasthan, Madhya Pradesh
(d) Madhya Pradesh, Maharashtra, Rajasthan
- 11** Bihar is the _____ largest State of India according to Census 2001.
(a) Second (b) Third (c) Fourth (d) Fifth
- 12** The highest wheat-producing State of India is:
(a) Haryana (b) Punjab
(c) Bihar (d) Uttar Pradesh
- 13** TISCO plant is located near:
(a) Patna (b) Darbhanga
(c) Dhanbad (d) Tatanagar
- 14** Which States in India are the largest producers of sugarcane?
(a) Bihar and Uttar Pradesh
(b) Uttar Pradesh and Rajasthan
(c) Andhra Pradesh and Jammu and Kashmir
(d) Punjab and Himachal Pradesh
- 15** Which of the following States has the largest number of people belonging to Scheduled Castes?
(a) Bihar (b) West Bengal
(c) Uttar Pradesh (d) Punjab
- 16** According to 2001 Census, what is the total population of Bihar?
(a) 8, 29, 98, 509 (b) 7, 62, 10, 007
(c) 9, 68, 78, 627 (d) 8, 01, 76, 197
- 17** The East Central Railway zone headquarters is located at:
(a) Patna (b) Hajipur
(c) Muzaffarpur (d) Katihar
- 18** Where is Industries Commissioner Office of Bihar situated?
(a) Patna (b) Gaya
(c) Hajipur (d) Muzaffarpur
- 19** North Bihar is famous for:
(a) Agricultural prosperity (b) Heavy industries
(c) Flood (d) Famine
- 20** Which one is not located on National Highway-2 (NH-2)?
(a) Aurangabad (b) Sasaram
(c) Mohania (d) Patna
- 21** Congress passed the 'Swaraj' resolution in the year 1905. The purpose of the resolution was:
(a) Right to make a constitution for themselves but it was not done
(b) To secure self-rule
(c) Responsible government
(d) Self-government
- 22** In which year was the Provincial Act of Government passed?
(a) 1935 (b) 1932 (c) 1936 (d) 1947
- 23** The Indian Constitution comprises of:
(a) 395 Articles, 22 Parts and 12 Schedules
(b) 371 Articles, 21 Parts and 11 Schedules
(c) 372 Articles, 20 Parts and 7 Schedules
(d) 381 Articles, 23 Parts and 8 Schedules
- 24** The Rajya Sabha consists of:
(a) 280 members of which 20 members are nominated by the President of India
(b) 270 members of which 18 members are nominated by the President of India
(c) 250 members of which 12 members are nominated by the President of India
(d) 252 members of which 12 members are nominated by the President of India

- 25** January 26 was selected as the date for the inauguration of the Constitution, because:
- The Congress had observed it as the Independence Day in 1930
 - On that day the Quit India Movement was started in 1942
 - It was considered to be an auspicious day
 - None of the above
- 26** The Public Accounts Committee submits its report to:
- The Comptroller and Auditor General
 - The Speaker of the Lok Sabha
 - The Minister of Parliamentary Affairs
 - The President of India
- 27** Of the following statements, which one is not correct?
- The Rajya Sabha is powerless in money matter
 - Money Bills originate in the Rajya Sabha
 - The Rajya Sabha has to pass bills within 14 days after they are passed by the Lok Sabha
 - The Rajya Sabha may pass or return the Money Bill with some recommendations to the Lok Sabha
- 28** Which of the following rights conferred by the Constitution of India is also available to non-citizens?
- Right to constitutional remedies
 - Freedom of speech
 - Freedom to move and settle in any part of the country
 - Freedom to acquire property
- 29** Who is the head of the National Defence Committee?
- Home Minister
 - Prime Minister
 - President
 - Vice-President
- 30** 'National Emergency' may be declared by the President of India in line with:
- Article 352
 - Article 370
 - Article 371
 - Article 395
- 31** Of the following statements, which one is not correct?
- The Supreme Court was constituted in 1950
 - The Supreme Court is the highest court of appeal in the country
 - The Supreme Court can hear from any High Court/Tribunals except from Court-martial
 - The Supreme Court can hear from any High Court/Tribunals as well as from Court-martial
- 32** Who is the constitutional head of the State Governments:
- Chief Minister
 - Governor
 - Speaker
 - High Court Judge
- 33** Commercial sources of energy purely consist of:
- Power, coal, oil, gas, hydro-electricity, and uranium
 - Coal, oil, firewood, vegetable waste, and agricultural waste
 - Power, coal, animal dung, and firewood
 - Coal, gas, oil, and firewood
- 34** In India, per capita consumption of energy in 1994 was:
- 300 kg of oil equivalent
 - 360 kg of oil equivalent
 - 243 kg of oil equivalent
 - 343 kg of oil equivalent
- 35** When did the first oil crisis/energy crisis occur in India?
- During 1950's and 1960's
 - During 1930's and 1940's
 - During 1990's and 2000's
 - During 1970's and 1980's
- 36** Consider the following reasons for financial sickness of State Electricity Boards (SEBs) in India:
- Sale of power to agricultural and domestic consumers below the cost of production
 - Transmission and distribution losses are very high
 - Lack of commercial autonomy for SEBs
 - State Governments have implemented social subsidy policies through SEBs
- Which of the above are correct?
- I, II and III
 - I, II, III and IV
 - I, III and IV
 - II, III and IV
- 37** Which type of economy does India have?
- Socialist
 - Gandhian
 - Mixed
 - Free
- 38** When was 'Speed Post Service' launched by the Indian Postal Department as competition to the 'Courier Service'?
- 1988
 - 1987
 - 1989
 - 1986
- 39** We witnessed the first telephones in India in the year:
- 1951
 - 1981
 - 1851
 - 1882
- 40** Consider the following problems being faced by the Indian Coal Industry:
- Poor quality of coal and bottlenecks in the coal movement
 - Low utilisation capacity of washeries
 - Growing dependence on the import of coking coal
 - Administered prices
- Which of the above are correct?
- II, III and IV
 - I, II, III and IV
 - I, III and IV
 - I, II and III
- 41** Name the committee which was set up by the NDC in 1957 for the reorganisation of CDP and NES, and which suggested a three-tier system of rural local government:
- Balwant Rai Mehta Committee
 - Ashok Mehta Committee
 - Maharashtra Committee on Democratic Decentralisation
 - Rural-Urban Relationship Committee
- 42** Ashok Mehta Committee recommended:
- Three-tier government of Panchayati Raj
 - Two-tier government of Panchayati Raj
 - Single-tier government of Panchayati Raj
 - Multiple-tier government of Panchayati Raj
- 43** Consider the following about the 'Rolling Plan':
- A plan for the current year which includes the annual budget.
 - A plan for a fixed number of years, say 3, 4 or 5.
 - It is revised every year as per requirements of the economy.
 - A perspective plan for 10, 15 or 20 years.
- Which of the above are correct?
- I and II
 - I and III
 - II and III
 - I, II, III and IV

- 44** In which year was the 'Planning Commission' set up in India?
 (a) 1950 (b) 1947 (c) 1948 (d) 1951
- 45** Patna International Airport is directly connected with:
 (a) Kathmandu (Nepal), New Delhi, Kolkata, Mumbai, Lucknow, Varanasi, and Ranchi
 (b) Bengaluru, Hyderabad, and Dhaka
 (c) Islamabad, Dhaka, and Bengaluru
 (d) Washington, Dhaka, and Chennai
- 46** In Bihar, air services are provided by:
 (a) Only Indian Airlines
 (b) Only Sahara Airlines
 (c) Only Royal Nepal Airlines
 (d) Indian Airlines, Sahara Airlines, and Royal Nepal Airlines
- 47** For Bihar, in 1993-94, the Planning Commission estimated that the percentage of below poverty line (BPL) was:
 (a) 55 (b) 65 (c) 45 (d) 35
- 48** In Bihar, though 'Zamindari' was statutorily abolished in 1952, the social base of land control remained in the grip of:
 (a) Middle Caste Hindus (b) Scheduled Caste Hindus
 (c) Dominant Caste Hindus (d) Scheduled Tribe Hindus
- 49** How many 'Industrial Area Development Authorities' had Bihar state (before separation)?
 (a) Six, viz., Adityapur, Bokaro, Patna, Ranchi, Darbhanga, and Muzaffarpur
 (b) Five, viz., Adityapur, Bokaro, Darbhanga, Muzaffarpur, and Patna
 (c) Seven, viz., Adityapur, Darbhanga, Ranchi, Bokaro, Patna, Muzaffarpur, and Bhojpur
 (d) Four, viz., Adityapur, Bhojpur, Muzaffarpur, and Khagaria
- 50** In Bihar, name the scheme which aims at building up infrastructural facilities of high standard, required for the establishment of 'Export oriented Units':
 (a) Integrated Infrastructural Development (IID)
 (b) Export Promotion Industrial Park (EPIP)
 (c) Concept of Build-Operate Transfer (BOT)
 (d) Software/Hardware Technology Park (STP/HTP)
- 51** "Swaraj is my birthright and I shall have it". Who said these words?
 (a) Mahatma Gandhi (b) Jawaharlal Nehru
 (c) Bal Gangadhar Tilak (d) Bhagat Singh
- 52** The Madras Mahajan Sabha was established in the year:
 (a) 1880 (b) 1881 (c) 1882 (d) 1884
- 53** How many representatives took part in the First Session of the Indian National Congress?
 (a) 52 (b) 62 (c) 72 (d) 82
- 54** The first Indian Governor General of Independent India was:
 (a) Raja Gopalachari (b) Surinder Nath
 (c) Rajendra Prasad (d) B. R. Ambedkar
- 55** When was the National Council of Education established?
 (a) 15th August, 1903 (b) 15th August, 1904
 (c) 15th August, 1905 (d) 15th August, 1906
- 56** The Non-Cooperation Movement was started in:
 (a) 1918 (b) 1920 (c) 1921 (d) 1922
- 57** The Montague-Chelmsford Report formed the basis of:
 (a) The Indian Independence Act, 1947
 (b) The Indian Councils Act, 1909
 (c) The Government of India Act, 1919
 (d) The Government of India Act, 1935
- 58** Who is popularly known as 'Sher-e-Punjab'?
 (a) Rajguru (b) Bhagat Singh
 (c) Lala Lajpat Rai (d) Udham Singh
- 59** Gandhi-Irwin Pact took place in:
 (a) 1930 (b) 1931 (c) 1932 (d) 1933
- 60** Which Round Table Conference held in 1932?
 (a) First (b) Second (c) Third (d) Fourth
- 61** Who among the following is associated with 'Abhinav Bharat'?
 (a) V.D. Savarkar (b) C. R. Das
 (c) B.G. Tilak (d) S. C. Bose
- 62** 'Do or Die' is associated with which of the following movement?
 (a) Dandi March (b) Non-Cooperation
 (c) Khilafat (d) Quit India
- 63** With whose efforts was the Second Bihar Provincial Congress Session held?
 (a) G. K. Gokhale (b) Shri Deepnarayan Singh
 (c) Shri Krishna (d) Surendranath Banerjee
- 64** At which place was the 27th Session of the Indian National Congress held?
 (a) Bhagalpur (b) Patna
 (c) Ranchi (d) Bankipur
- 65** The 16th Session of Bihari Students' Conference at Hazaribagh took place in:
 (a) 1921 (b) 1922 (c) 1923 (d) 1924
- 66** The editor of 'Bihari', a leading newspaper of Bihar, was:
 (a) Babu G. Prasad (b) Babu Ram Prasad
 (c) Babu Gopal Prasad (d) Babu Maheshwar Prasad
- 67** Raj Kumar Shukla was the resident of village:
 (a) Murali Bharhawa (b) Murli Bheet
 (c) Murli Dheer (d) Murli Kher
- 68** Shri Nivaranachandra Dasgupta belonged to:
 (a) Patna (b) Purulia
 (c) Hazipur (d) Meenapur
- 69** Kunwar Singh was a freedom fighter from:
 (a) Hamirpur (b) Dheerpur
 (c) Jagdishpur (d) Rampur
- 70** Lord Sinha had resigned in 1921 from the post of Governor of:
 (a) Bihar-Orissa (b) Bengal
 (c) Punjab (d) Madras
- 71** The value of $x - [y - \{z - (x - \overline{y - z})\}]$ is:
 (a) $x + y + z$ (b) $x - y - z$
 (c) 1 (d) 0
- 72** If the function $f: 1^+ \rightarrow \mathbb{R}$ $f(x) = \log x$ then the value of $f(x) + f(y)$ is:
 (a) $f(xy)$ (b) $f(x + y)$ (c) $f(x/y)$ (d) $f(y/x)$
- 73** The median of 2, 4, 6, 8, 10, 12, 14, 16 is:
 (a) 8 (b) 9 (c) 10 (d) 11
- 74** The inverse of the matrix $\begin{bmatrix} 5 & 2 \\ 7 & 3 \end{bmatrix}$ is:
 (a) $\begin{bmatrix} 3 & 2 \\ -7 & 5 \end{bmatrix}$ (b) $\begin{bmatrix} 3 & 2 \\ 7 & 5 \end{bmatrix}$

(c) $\begin{bmatrix} 3 & -2 \\ -7 & 5 \end{bmatrix}$

(d) $\begin{bmatrix} -3 & -2 \\ -7 & -5 \end{bmatrix}$

75 The length of the minute hand of a clock is 12 cm. Then the area swept by the minute hand in one minute will be:

- (a) 22.12 cm² (b) 23.10 cm²
(c) 24.12 cm² (d) None of the above

76 A player completes a 2200 metre race in any circular path with 7 revolutions. Then the radius of the circular path is $\left(\pi = \frac{22}{7}\right)$:

- (a) 30 metres (b) 40 metres
(c) 50 metres (d) 60 metres

77 The coordinate of the mid-point on joining the points P (4, 6) and Q (-4, 8) will be:

- (a) (2, 7) (b) (7, 2) (c) (7, 0) (d) (0, 7)

78 The solution of the differential equation

$$\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = e^{5x}$$

(a) $y = c_1e^x + c_2e^{2x} + \frac{1}{12}e^{5x}$

(b) $y = c_1e^{-x} + c_2e^{2x} + \frac{1}{12}e^{5x}$

(c) $y = c_1e^x + c_2e^{-2x} + \frac{1}{12}e^{5x}$

(d) $y = c_1e^x + c_2e^{2x} + \frac{1}{12}e^{5x}$

79 In triangle PQR if $\angle P = 120^\circ$ and $PQ = PR$, then $\angle Q$ and $\angle R$ will be respectively:

- (a) 60°, 30° (b) 30°, 40° (c) 30°, 30° (d) 20°, 40°

80 The value of $\lim_{x \rightarrow 0} \frac{a^x - b^x}{x}$ is

- (a) 0 (b) $\log_e\left(\frac{a}{b}\right)$ (c) $\log e^{\frac{b}{a}}$ (d) $b - a$

81 The visible range of solar radiation is:

- (a) 100-400 nm (b) 400-700 nm
(c) 740-10000 nm (d) None of the above

82 The plants which grow on saline soils are:

- (a) Xerophytes (b) Hydrophytes
(c) Halophytes (d) Succulents

83 Environment is a composite state of:

- (a) Biotic factors (b) Physiographic factors
(c) Abiotic factors (d) All of the above

84 Water is conducted in vascular plants by:

- (a) Phloem tissue (b) Parenchyma tissue
(c) Meristematic tissue (d) Xylem tissue

85 Which component of a plant receives stimulus for flowering?

- (a) Stems (b) Branches
(c) Leaves (d) Roots

86 Minerals are:

- (a) Liquids (b) Inorganic solids
(c) gases (d) All of the above

87 Development of the natural systems is described as:

- (a) Function of the systems
(b) Evolution of the systems

(c) Self-sustained process of the systems

(d) None of the above

88 Genetics deals with:

- (a) Mendel's laws (b) Organic evolution
(c) DNA structure (d) Heredity and variations

89 Mendel's principles of inheritance are based on:

- (a) Vegetative reproduction (b) Asexual reproduction
(c) Sexual reproduction (d) All of the above

90 Embryo is found in:

- (a) Flowers (b) Leaves
(c) Seeds (d) Buds

91 What soil particles are present in loamy soils?

- (a) Sand particles (b) Clay particles
(c) Silt particles (d) All types of particles

92 A single type of atom is found in:

- (a) Compounds of minerals (b) Mixture of minerals
(c) Native elements (d) None of the above

93 Soil water available to plants is maximum in:

- (a) Clayey soil (b) Silty soil
(c) Sandy soil (d) Loamy soil

94 Capillaries are most effective in:

- (a) Clayey soil (b) Silty soil
(c) Sandy soil (d) Loamy soil

95 Photosynthesis occurs in:

- (a) Nucleus (b) Mitochondria
(c) Chloroplast (d) Peroxisome

96 Continents have drifted apart because of:

- (a) Volcanic eruptions
(b) Tectonic activities
(c) Folding and faulting of rocks
(d) All of the above

97 Which of the following does not belong to solar system?

- (a) Asteroids (b) Comets
(c) Planets (d) Nebulae

98 Table salt (NaCl) is a product of:

- (a) Weak acid and weak base
(b) Strong acid and strong base
(c) Weak acid and strong base
(d) Strong acid and weak base

99 Sexual reproduction causes genetic variation because of:

- (a) Blending of genes (b) Chromosomal changes
(c) Shuffling of genes (d) All of the above

100 Average salinity of the water of Arabian Sea is:

- (a) 25 ppt (b) 35 ppt (c) 45 ppt (d) 55 ppt

101 Who among the following is the winner of the Mahatma Gandhi International Award for Peace and Reconciliation, 2009?

- (a) Yukia Amano (b) Aung San Suu Kyi
(c) Bill Gates (d) Hillary Clinton

102 'Durand Cup' is associated with the game of:

- (a) Football (b) Polo
(c) Cricket (d) Hockey

103 For which word has the letter 'G' been used in '2G Spectrum'?

- (a) Global (b) Government
(c) Generation (d) Google

- 104** Former Central Minister for Communication and Information Technology, Mr. A. Raja belongs to
 (a) Congress (b) BJP
 (c) Communist Party of India (d) DMK
- 105** Which one of the following numbered Rajdhani trains covers the longest distance?
 (a) 12429 Bangalore City Junction
 (b) 12431 Trivandrum Central
 (c) 12433 Chennai Central
 (d) 12435 Dibrugarh Town
- 106** What is the minimum age of a person whose photographing, fingerprinting and iris mapping will be done for the Census of 2011?
 (a) 12 years (b) 15 years (c) 18 years (d) 21 years
- 107** The Union Cabinet on August 2010, decided to form institutes like the All India Institute of Medical Sciences (AIIMS) in six states. These are:
 (a) Bihar, Chhattisgarh, Madhya Pradesh, Orissa, Rajasthan, Uttarakhand
 (b) Bihar, Uttar Pradesh, Himachal Pradesh, Haryana, Kerala, Gujarat
 (c) Bihar, Uttarakhand, Jharkhand, Orissa, Andhra Pradesh, Maharashtra
 (d) Bihar, Tamil Nadu, Karnataka, Uttar Pradesh, Jammu and Kashmir, Assam
- 108** Which was reported the richest party according to the 'National Election Watch' on August 2010?
 (a) BSP (b) BJP
 (c) Socialist Party (d) Congress
- 109** Which party-wise performance is correct for Bihar Assembly Elections, 2010 in comparison to the elections of 2005?
 JDU, BJP, RJD, LJP, CONG, OTHERS:
 (a) +40 +25 -30 -10 -7 -19 (b) +25 +34 -20 -5 -3 -11
 (c) +27 +36 -32 -7 -5 -19 (d) +17 +46 -15 -10 -10 -10
- 110** Till 2010, which State Governments have provided 50 percent reservation for women in local bodies?
 (a) Bihar, Uttar Pradesh, Rajasthan
 (b) Bihar, Madhya Pradesh, Himachal Pradesh
 (c) Bihar, Madhya Pradesh, Kerala
 (d) Bihar, Himachal Pradesh, Uttar Pradesh
- 111** 'AVAHAN', the Indian segment of 'Bill and Melinda Gates Foundation', is engaged in the prevention of:
 (a) Dengue (b) Polio
 (c) HIV/AIDS (d) Filariasis
- 112** A recently held underwater meeting has drawn attention the world over. The meeting was held by:
 (a) Some Somali pirates to make a new strategy for capturing ships for ransom
 (b) Some environmental scientists for promoting awareness towards saving water
 (c) Some activists for promoting environmental awareness against air pollution
 (d) The cabinet of a country to highlight the threat of rising sea level for any country
- 113** Which one of the following cities is not located on the bank of river Ganga?
 (a) Fatehpur (b) Bhagalpur
 (c) Uttarkashi (d) Kanpur
- 114** Which one of the following is a human right as well as a fundamental right under the Constitution of India?
 (a) Right to Information (b) Right to Work
 (c) Right to Education (d) Right to Housing
- 115** The time at Cairo is 2 hours ahead of Greenwich. Hence, it is located at:
 (a) 30° W longitude (b) 30° E longitude
 (c) 28° E longitude (d) 28° W longitude
- 116** The headquarters of International Court of Justice is at:
 (a) Hague (b) New York
 (c) Geneva (d) Paris
- 117** In the world's best countries' list, compiled by the reputed 'News Week' magazine in 2010, the first position went to Finland. What was the rank of India?
 (a) 17 (b) 48 (c) 66 (d) 78
- 118** Which university was ranked first in the list of 2010 Academic Rankings of the World Universities?
 (a) Jawaharlal Nehru University, India
 (b) Cambridge University, Britain
 (c) Harvard University, USA
 (d) Massachusetts Institute of Technology, USA
- 119** Which date is known as 'Diabetes Day'?
 (a) 14th February (b) 14th May
 (c) 14th September (d) 14th November
- 120** In which country did Ms. Julia Gillard become the first woman Prime Minister in the year 2010?
 (a) Australia (b) Canada
 (c) Germany (d) Poland
- 121** Which country's parliament has banned 'Burqa' by passing a law on 14th September, 2010?
 (a) USA (b) France (c) Italy (d) Holland
- 122** Mr. Arjun Munda was on September 11, 2010 sworn in as the Chief Minister of Jharkhand. How many MLAs in the 81-member Assembly supported him?
 (a) 41 (b) 45 (c) 50 (d) 55
- 123** Mr. P. J. Thomas has been appointed as the Central Vigilance Commissioner on September 7, 2010. He is an IAS Officer of the cadre of state:
 (a) Assam (b) Karnataka
 (c) Kerala (d) Tamil Nadu
- 124** What was the maximum amount that has been provided as financial autonomy by the Ministry of Heavy Industries and Public Enterprises of Union Government to the 'Mini Ratna', category I?
 (a) ₹ 250 crore (b) ₹ 350 crore
 (c) ₹ 400 crore (d) ₹ 500 crore
- 125** When was the Right to Education added through the amendment in the Constitution of India?
 (a) 1st April, 2010 (b) 1st August, 2010
 (c) 1st October, 2010 (d) 1st December, 2010
- 126** Match the achievements of India in the XVI Asian Games, 2010:

List-I		List-II	
(1)	Rank	(P)	14
(2)	Gold	(Q)	34
(3)	Silver	(R)	06
(4)	Bronze	(S)	17

Codes:

	1	2	3	4
(a)	Q	R	P	S
(b)	P	Q	R	S
(c)	R	P	S	Q
(d)	S	R	P	Q

- 127** To which institute does Shubha Tole, the first woman awardee of prestigious Shanti Swarup Bhatnagar Prize, 2010 in the field of Science, belongs?
 (a) Tata Institute of Fundamental Research, Mumbai
 (b) Indian Institute of Science Education and Research, Pune
 (c) Indian Institute of Technology, Kanpur
 (d) Indian Institute of Science, Bengaluru
- 128** Which Indian was honoured by the 'World Statesman Award, 2010'?
 (a) Mrs. Sonia Gandhi (b) Atal Bihari Vajpayee
 (c) Dr. Manmohan Singh (d) Lal Krishna Advani
- 129** India's Third Research Centre at Antarctica is named as:
 (a) Bharati (b) Swagatam
 (c) Hindustan (d) Maitri
- 130** In Commonwealth Games, 2010, India won 101 medals. Out of them, how many medals have been received by team events, women and men, respectively?
 (a) 0, 37, 64 (b) 2, 35, 64
 (c) 1, 37, 63 (d) 1, 36, 64
- 131** Which of the following is a Harappan port?
 (a) Alexandria (b) Lothal
 (c) Mahasthangarh (d) Nagapattanam
- 132** The Gupta emperor who defeated the 'Hunas' was:
 (a) Samudragupta (b) Chandragupta
 (c) Skandagupta (d) Ramgupta
- 133** What is the name of Kalhana's book?
 (a) Arthashastra (b) Indica
 (c) Purana (d) Rajtarangini
- 134** Which inscription tells about the various achievements of Rudradaman I?
 (a) Junagarh (b) Bhitari (c) Nasik (d) Sanchi
- 135** Who was the first ruler of the Slave dynasty?
 (a) Qutubuddin Aibak (b) Iltutmish
 (c) Razia (d) Balban
- 136** Who was the ruler of Devgiri at the time of Alauddin Khalji's invasion?
 (a) Prataprudra Dev (b) Ramchandra Dev
 (c) Malik Kafur (d) Rana Ratan Singh
- 137** Who of the following Muslim rulers abolished the pilgrimage tax?
 (a) Bahalol Lodi (b) Sher Shah
 (c) Humayun (d) Akbar
- 138** What was 'Dar-ul-Shafa' established by Firoz Tughlaq?
 (a) An arms house (b) A free hospital
 (c) A library (d) A guest house for pilgrims
- 139** The 'Permanent Settlement' was made with:
 (a) Zamindars (b) Village communities
 (c) Muqaddamas (d) Peasants
- 140** Who was the founder of 'Prarthana Samaj'?
 (a) Atmaram Panduranga (b) Tilak
 (c) Annie Besant (d) Rasbihari Ghosh
- 141** Who was the father of Indian Renaissance?
 (a) Bal Gangadhar Tilak (b) Dayananda Saraswati
 (c) Shradhdhananda (d) Raja Ram Mohan Roy
- 142** 'Swaraj Dal' was founded by:
 (a) Tilak and Chittaranjan Das
 (b) Gandhi and Motilal Nehru
 (c) Gandhi and Tilak
 (d) Chittaranjan Das and Motilal Nehru
- 143** Who founded the 'Theosophical Society'?
 (a) Madame H. P. Blavatsky (b) Raja Ram Mohan Roy
 (c) Mahatma Gandhi (d) Swami Vivekananda
- 144** Which one of the following books was written by Tilak?
 (a) India in Transition
 (b) Gita Rahasya
 (c) Gokhale-My Political Guru
 (d) Discovery of India
- 145** Where was Mahaveer Swami born?
 (a) Kundagram (b) Pataliputra
 (c) Magadh (d) Vaishali
- 146** Where did Mahatma Buddha's 'Mahaparinirvan' take place?
 (a) Lumbini (b) Bodh Gaya
 (c) Khusinagar (d) Kapilavastu
- 147** At which place did Mahatma Buddha give his first 'Dharmachakrapravartan'?
 (a) Lumbini (b) Sarnath
 (c) Pataliputra (d) Vaishali
- 148** What was the early capital of Magadh?
 (a) Pataliputra (b) Vaishali
 (c) Rajagriha (Girivraja) (d) Champa
- 149** What was the name of the dynasty of Ajatshatru?
 (a) Maurya (b) Haryanka
 (c) Nanda (d) Gupta
- 150** The Third Buddhist Council convention was held at:
 (a) Takshashila (b) Sarnath
 (c) Bodh Gaya (d) Pataliputra

ANSWERS WITH EXPLANATION**1** Option (d) is correct.**Explanation:**

- The Taklamakan Desert is located in **China**.
- It is situated in the Tarim Basin in the Xinjiang Uyghur Autonomous Region, in the northwest part of the country.

2 Option (a) is correct.**Explanation:**

- The strait that connects the Red Sea and the Indian Ocean is Bab-el-Mandeb.
- It is a narrow strait located between Yemen on the Arabian Peninsula, and Djibouti and Eritrea in the Horn of Africa.

3 Option (b) is correct.**Explanation:**

- The Ninety East Ridge is situated in the Indian Ocean.
- The Ninety East Ridge is a submarine volcanic ridge located in the eastern part of the Indian Ocean.

4 Option (b) is correct.

Explanation: Sydney is a major city in Australia, but it is not the capital city. Located in the southeastern part of the country, it is the largest and most populous city in Australia, known for its beautiful harbor, iconic Opera House, and Harbor Bridge.

5 Option (c) is correct.**Explanation:**

- The highest coal-producing country in the world is China.
- India is the second-largest producer of coal, followed by the United States and Russia, respectively.

6 Option (c) is correct.**Explanation:**

- Folding is a geological process that involves the deformation of rock layers or strata, resulting in the formation of folds.
- The force responsible for folding is primarily orogenic force. Orogenetic forces are endogenetic forces, meaning they originate from within the Earth's crust and are generated by the movement of tectonic plates. These forces are a result of the collision of tectonic plates, which can result in the deformation and folding of rock layers.

7 Option (a) is correct.**Explanation:**

- The climate of a region is determined by various factors such as latitude, altitude, distance from the sea, and prevailing wind patterns.
- In the case of Amritsar and Shimla, both cities are located at similar latitudes, but their climate differences are primarily due to their difference in altitude.

8 Option (a) is correct.

Explanation: Coal mining is a significant economic activity in Jharkhand, and the state has some of the largest coal mines in India.

9 Option (a) is correct.

Note: According to BPSC, answer is (a), but it should be (b).

Explanation:

- The salinity of seawater refers to the concentration of dissolved salts in the water.
- The major source of oceanic salinity is rivers, which carry dissolved salts and other minerals from the land to the oceans.

10 Option (a) is correct.**Explanation:**

- The three largest states in India by area are Rajasthan, (342,239 square kilometers) Madhya Pradesh (308,252 square kilometers), and Maharashtra (307,713 square kilometers). The correct order of these states by area is:
Rajasthan > Madhya Pradesh > Maharashtra

11 Option (b) is correct.

Explanation: According to Census 2001, Bihar is the third largest state in India in terms of population.

12 Option (d) is correct.

Explanation: Uttar Pradesh was the largest wheat-producing state in India, followed by Punjab, Haryana, and Madhya Pradesh in 2011.

13 Option (d) is correct.**Explanation:**

- TISCO plant, also known as Tata Steel Plant, is located near Tatanagar, which is a city in the state of Jharkhand, India.
- The plant was established in 1907, and it is one of the oldest and largest steel plants in India.

14 Option (a) is correct.

Explanation: As of 2011, Uttar Pradesh and Maharashtra were the largest producers of sugarcane in India. Bihar was also a significant producer, ranking third in terms of sugarcane production.

15 Option (c) is correct.**Explanation:**

- Uttar Pradesh has the largest number of people belonging to Scheduled Castes in India.
- According to Census 2011, the Scheduled Caste population in Uttar Pradesh was 41,381,965, which is the highest in the country.

16 Option (a) is correct.

Explanation: In 2001, Bihar had a total population of 82,998,509, comprising 43,243,795 males and 39,754,714 females.

17 Option (b) is correct.**Explanation:**

- The East Central Railway (ECR) zone headquarters is located in Hajipur, Bihar.
- The ECR zone was created on 1st October 2002, by carving out areas from the Eastern and Northern Railways.

18 Option (a) is correct.

Explanation:

- The Industries Commissioner Office of Bihar is situated in Patna, the capital city of Bihar.
- The Industries Commissionerate is responsible for the development and promotion of industries in the state of Bihar.

19 Option (c) is correct.

Explanation:

- North Bihar known for its vulnerability to floods.
- Due to its proximity to the Himalayan Mountains and the presence of several major rivers such as Kosi, Gandak, Burhi Gandak, Bagmati etc. the region is prone to frequent flooding, which causes extensive damage to crops, property, and infrastructure.

20 Option (d) is correct.

Explanation: NH-2 is a major national highway in India that connects the cities of Delhi and Kolkata. It passes through several important cities and towns in the states of Uttar Pradesh, Bihar (including Aurangabad, Sasaram, and Mohania), Jharkhand and West Bengal.

21 No option is correct. (Bonus)

22 Option (a) is correct.

Explanation:

- The Government of India Act 1935 was passed in the year 1935 by the British Indian government.
- The Act established provincial autonomy and introduced a federal system of government in India.

23 Option (a) is correct.

Explanation:

- The Indian Constitution comprises of 395 Articles, 22 Parts and 12 Schedules.
- It was adopted by the Constituent Assembly of India on November 26, 1949, and came into effect on January 26, 1950.

24 Option (c) is correct.

Explanation:

- The Rajya Sabha is the upper house of the Indian Parliament.
- It consists of a maximum of 250 members, of which 238 members represent the States and Union Territories, and the remaining 12 members are nominated by the President of India.

25 Option (a) is correct.

Explanation: January 26 was selected as the date for the inauguration of the Constitution because the Indian National Congress had observed it as the Independence Day in 1930.

26 Option (b) is correct.

Explanation:

- The Public Accounts Committee (PAC) is a standing committee of the Parliament of India, which is constituted every year to examine the audit reports of Comptroller and Auditor General (CAG) after they are laid in the Parliament.
- After examining the CAG's report, the PAC prepares its report which contains its findings, observations, and recommendations.

- This report is then presented to the Lok Sabha Speaker, who lays it before the Parliament.

27 Option (b) is correct.

Explanation:

- Money Bills actually originate in the Lok Sabha, not in the Rajya Sabha.
- The Rajya Sabha can discuss and examine the Money Bills but cannot vote on them.
- The Rajya Sabha must return the Bill to the Lok Sabha within 14 days with its recommendations.
- However, the Lok Sabha is not bound to accept the recommendations of the Rajya Sabha.
- Hence, Rajya Sabha is powerless in Money Matter.

28 Option (a) is correct.

Explanation:

- The Right to Constitutional Remedies is enshrined in Article 32 and Article 226 of the Constitution of India.
- It provides the right to all citizens, including non-citizens, to move to the Supreme Court or High Court for the enforcement of their fundamental rights.

29 No option is correct. (Bonus)

30 Option (a) is correct.

Explanation:

- National Emergency can be declared in India by the President of India under Article 352 of the Constitution.
- The provisions related to emergencies can be found in Part XVIII of the Indian Constitution, ranging from Article 352 to Article 360.

31 Option (d) is correct.

Explanation:

- As per Article 136 of the Constitution of India, the Supreme Court has the power to grant special leave to appeal, at its discretion, any judgment, decree, determination, sentence, or order passed by any court or tribunal in India.
- However, this provision does not apply to any judgment, determination, sentence, or order made by a court or tribunal established under any law related to the Armed Forces.

32 Option (b) is correct.

Explanation:

- The constitutional head of the State Governments in India is the Governor.
- Article 153 of the Indian Constitution provides for the appointment of the Governor as the head of the state executive.

33 No option is correct. (Bonus)

34 No option is correct. (Bonus)

35 Option (d) is correct.

Explanation:

- The first oil crisis or energy crisis in India occurred during the 1970s and early 1980s.
- The oil crisis had a severe impact on India's economy, as the country was heavily dependent on imported oil to meet its energy requirements.

36 Option (b) is correct.

Explanation: All the given reasons contribute to the financial sickness of State Electricity Boards (SEBs) in India, as explained below:

- I. SEBs in India provide power to agricultural and domestic consumers at subsidized rates, which are lower than the cost of production. As a result, SEBs incur losses on these sales, which contribute to their financial sickness.
- II. Another reason for the financial sickness of SEBs in India is the high transmission and distribution losses in the power sector. These losses occur due to technical inefficiencies, theft of electricity, and poor maintenance of the distribution infrastructure.
- III. The lack of commercial autonomy for SEBs is another factor contributing to their financial sickness. SEBs in India are often subject to political interference, which leads to poor decision-making and mismanagement of resources.
- IV. State Governments in India have implemented social subsidy policies through SEBs to provide power to certain sections of society at subsidized rates. While these policies are intended to provide social welfare, they often lead to financial losses for SEBs.

37 Option (c) is correct.

Explanation: India has a mixed economy, which means that it combines elements of both market-based and centrally planned economic systems.

38 Option (d) is correct.

Explanation: The "Speed Post Service" was launched by the Indian Postal Department in the year 1986 as a competition to the emerging private courier services in India.

39 No option is correct. (Bonus)

40 Option (b) is correct.

Explanation:

- All the four problems mentioned are being faced by the Indian Coal Industry.
- Indian coal is known to be of poor quality and contains high levels of ash, sulfur, and other impurities, which make it less efficient for use in power generation and other industries.
- Coal washeries are used to remove impurities from raw coal, but their utilization capacity in India is low due to factors such as inadequate technology, lack of investment, and inefficiencies in the management of the washeries.
- India's steel industry is heavily dependent on coking coal, most of which is imported from other countries. This has made India vulnerable to fluctuations in global coal prices and supply disruptions.
- The prices of coal in India are administered by the government, which can result in a lack of price transparency, inefficiencies in the allocation of coal resources, and a disincentive for private investment in the coal industry.

41 Option (a) is correct.

Explanation: The Balwant Rai Mehta Committee was constituted to review the working of the Community Development Program (CDP) and National Extension

Service (NES) and suggest measures for their reorganization and expansion.

42 Option (b) is correct.

Explanation: Ashok Mehta Committee was set up by the Government of India in 1977 to examine the working of the Panchayati Raj institutions in India and suggest measures for their improvement. The Committee submitted its report in 1978, which recommended a two-tier system of Panchayati Raj in India, namely Gram Panchayats at the village level and Zila Parishads at the district level.

43 No option is correct. (Bonus)

44 Option (a) is correct.

Explanation:

- The Planning Commission of India was set up on March 15, 1950, by an executive resolution of the Government of India. The commission continued to play a crucial role in India's economic planning and development until it was replaced by the NITI Aayog (National Institution for Transforming India) on January 1, 2015.

45 Option (a) is correct.

Explanation: Patna International Airport is directly connected with Kathmandu (Nepal), New Delhi, Kolkata, Mumbai, Lucknow, Varanasi, and Ranchi.

46 No option is correct. (Bonus)

47 Option (a) is correct.

Explanation: For Bihar, in 1993-94, the percentage of below poverty line (BPL) was 55% as per estimation of the Planning Commission.

48 Option (c) is correct.

Explanation:

- In Bihar, like many other parts of India, zamindari was a system of land ownership and control where zamindars, who were typically wealthy landowners, were granted ownership of land by the British colonial government.
- However, the social base of land control in Bihar remained in the grip of dominant caste Hindus, who were often the same people who held the zamindari rights before they were abolished.

49 Option (a) is correct.

Explanation: The Bihar State, before its separation, had six Industrial Area Development Authorities (IADAs) established in various regions of the state. These IADAs were located in Adityapur (Jamshedpur), Bokaro, Patna (Patna), Ranchi, Darbhanga, and Muzaffarpur.

50 Option (b) is correct.

Explanation: The scheme which aims at building up infrastructural facilities of high standard, required for establishment of 'Export oriented Units' is the Export Promotion Industrial Park (EPIP).

51 Option (c) is correct.

Explanation: The quote "Swaraj is my birthright and I shall have it" is famously attributed to Bal Gangadhar Tilak, who was a prominent leader of the Indian independence movement against British colonial rule in India.

52 No option is correct. (Bonus)

53 Option (c) is correct.

Explanation:

- The Indian National Congress was established in 1885 when 72 delegates from various parts of the country gathered in Bombay (now Mumbai).
- Notable delegates included Dadabhai Naoroji, Surendranath Banerjee, Badruddin Tyabji, Pherozeshah Mehta, W. C. Bonnerjee, S. Ramaswami Mudaliar, S. Subramania Iyer, and Romesh Dutt.

54 Option (a) is correct.

Explanation:

- Raja Gopalachari, also known as C. Rajagopalachari or Rajaji, served as the first Indian Governor-General of independent India.
- He assumed office on August 15, 1947, the same day India gained independence from British rule. He served as the Governor-General from August 15, 1947, to January 26, 1950.

55 Option (d) is correct.

Explanation: The National Council of Education Bengal (NCE - Bengal) was founded by Satish Chandra Mukherjee and other Indian nationalists in Bengal on 15 August 1906 with the aim of promoting science and technology as part of the swadeshi industrialization movement.

56 Option (b) is correct.

Explanation: The Non-Cooperation Movement was launched on 5th September 1920 during the special session of the Indian National Congress held in Calcutta (now Kolkata).

57 Option (c) is correct.

Explanation:

- The Government of India Act, 1919, also known as the Montagu-Chelmsford Reforms, was enacted based on the recommendations of the Montagu-Chelmsford Report.
- It introduced the expansion of legislative councils, the introduction of dyarchy (a system of dual government) in the provinces, and the extension of limited franchise to some Indians.

58 Option (c) is correct.

Explanation:

- Lala Lajpat Rai, also known as Punjab Kesari, was a prominent freedom fighter and leader of the Indian independence movement.
- He was known for his active participation in various protests and movements against British rule, advocating for the rights and welfare of farmers and peasants, and promoting nationalism in Punjab.

59 Option (b) is correct.

Explanation:

- The Gandhi-Irwin Pact, also known as the Delhi Pact, was an agreement signed between Mahatma Gandhi, the leader of the Indian National Congress, and Lord Irwin, the then Viceroy of India, on March 5, 1931.
- The pact was aimed at resolving the issue of civil disobedience and the Salt Satyagraha, a significant campaign launched by Gandhi as part of the broader non-violent civil disobedience movement against British rule in India.

60 Option (c) is correct.

Explanation:

- The Round Table Conferences were a series of discussions held in London between 1930 and 1932, aimed at finding a solution to the constitutional reforms and the issue of self-rule in British India.
- The First Round Table Conference was held in London from November 12, 1930, to January 19, 1931.
- The Second Round Table Conference was held in London from September 7, 1931, to December 1, 1931.
- The Third Round Table Conference was held in London from November 17, 1932, to December 24, 1932.

61 Option (a) is correct.

Explanation: Abhinav Bharat was a secret society founded in 1904 by V. D. Savarkar.

62 Option (d) is correct.

Explanation:

- "Do or Die" is associated with the Quit India Movement.
- The Quit India Movement was a mass civil disobedience movement launched by Mahatma Gandhi on August 8, 1942, demanding an end to British colonial rule in India.

63 Option (b) is correct.

Explanation:

- The Second Bihar Provincial Congress Session was held on 17-18 February 1918 in Patna, Bihar.
- The session was organized mainly due to the efforts of Shri Deepnarayan Singh, a prominent Congress leader from Bihar.
- Shri Deepnarayan Singh was a lawyer and a social reformer who played a crucial role in the Indian independence movement.

64 Option (d) is correct.

Explanation:

- The 27th Session of the Indian National Congress was held in Bankipur, a locality in the city of Patna, Bihar.
- The session was held from December 26 to December 28, 1912.

65 Option (a) is correct.

Explanation:

- The Bihari Students' Conference was an organization established in 1906 by a group of students from Bihar and Jharkhand who were studying in Kolkata.
- Rajendra Prasad played a crucial role in forming the Bihari Students' Conference.
- The organization aimed to promote education and social reform in Bihar and Jharkhand.
- The 16th Session of the Bihari Students' Conference held in Hazaribagh in 1921 was a significant event in the history of the organization.

66 Option (d) is correct.

Explanation:

- Babu Maheshwar Prasad was the editor of Bihari that was a leading newspaper of Bihar.

- In 1903, "Bihar Times" was established in Patna, with a primary aim to advocate for Bihar's recognition as a separate province.
- Three years later, in 1906, the publication was renamed as "Bihari".

67 Option (a) is correct.

Explanation:

- Raj Kumar Shukla, a notable Indian freedom fighter, hailed from Murali Bharhawa village, located in the West Champaran district of Bihar.
- He is known for his instrumental role in persuading Mahatma Gandhi to visit Champaran and lead the Champaran Satyagraha, a movement aimed at addressing the grievances of indigo farmers in the region.

68 Option (b) is correct.

Explanation:

- Shri Nivaranachandra Dasgupta was a renowned Bengali writer and scholar, who made significant contributions to the fields of literature and culture.
- He was born and raised in the town of Purulia, which is located in the Purulia district of West Bengal, India.

69 Option (c) is correct.

Explanation:

- Kunwar Singh, also known as Veer Kunwar Singh, was a freedom fighter and a prominent leader of the Indian Rebellion of 1857.
- He was born in 1777 in the Jagdishpur estate in Bihar, which was part of the Awadh region of the British India at that time.

70 Option (a) is correct.

Explanation:

- Lord Sinha was the foremost Indian to be designated as the Governor of Bihar and Orissa in 1920 AD.
- Due to poor health, he stepped down from his position in 1921.
- Satyendra Prasanna Sinha, also known as Satyendra Prasanno Sinha or Satyendra Prasad Sinha, was a well-known British Indian statesman and lawyer born on March 24, 1863.

71 Option (d) is correct.

Explanation:

$$\begin{aligned} \text{Given, } x - [y - \{z - (x - \overline{y - z})\}] \\ y - z = y - z \\ \therefore x - [y - \{z - (x - (\overline{y - z}))\}] \\ = x - [y - \{z - (x - y + z)\}] \\ = x - [y - \{z - x + y - z\}] = x - [y - z + x - y + z] \\ = x - y + z - x + y - z = 0 \end{aligned}$$

72 Option (a) is correct.

Explanation: Since, $f(x) = \log x$

And, $f(y) = \log y$

Hence, $f(x) + f(y) = \log x + \log y$

$= \log xy$ (Since, $\log m + \log n = \log mn$)

Hence, $f(x) + f(y) = f(xy)$

73 Option (b) is correct.

Explanation: Given numbers are 2, 4, 6, 8, 10, 12, 14, 16

$$\begin{aligned} \text{Median for odd term} &= \left[\frac{(n+1)}{2} \right]^{\text{th}} \\ \text{Median for even term} &= \left[\frac{(n)}{2} + \left\{ \frac{(n)}{2} + 1 \right\} \right]^{\text{th}} \\ \text{Median} &= \frac{8+10}{2} = \frac{18}{2} = 9 \end{aligned}$$

74 Option (c) is correct.

Explanation:

$$\text{Given Matrix } A = \begin{bmatrix} 5 & 2 \\ 7 & 3 \end{bmatrix}$$

$$A^{-1} = \frac{(A)}{|A|}$$

$$|A| = 15 - 14 = 1$$

$$A^{-1} = \text{adj}(A) = [A_{ij}]^T$$

$$= \text{adj}(A) = \begin{bmatrix} 3 & -2 \\ -7 & 5 \end{bmatrix}$$

75 Option (d) is correct.

Explanation:

Given, Length of minute hand = 12 cm

\therefore The minute hand makes 360° in 60 minutes

\therefore In 1 minute it would move $360^\circ \times \frac{1}{60} = 6^\circ$

$$\begin{aligned} \therefore \text{Area of this sector} &= \frac{\theta}{360^\circ} \pi r^2 \\ &= \frac{6}{360} \times \frac{22}{7} \times 12 \times 12 \\ &= \frac{22 \times 12}{7 \times 5} = 7.542 \text{ cm}^2 \end{aligned}$$

76 Option (c) is correct.

Explanation:

\therefore It takes 7 round to complete 2200 m

\therefore in 1 round, it will complete $= \frac{2200}{7}$ m

$$\Rightarrow 2 \times \frac{22}{7} \times r = \frac{2200}{7} \text{ m}$$

Since, circumference = $2\pi r$

$$r = \frac{2200}{22 \times 2} = \frac{100}{2} \text{ m}$$

$$r = 50 \text{ m}$$

77 Option (d) is correct.

Explanation:

Mid point of a line segment

Given, P (4, 6) & Q (-4, 8)

$$\begin{aligned} M &= \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \\ &= \left(\frac{4 + (-4)}{2}, \frac{6 + 8}{2} \right) \\ &= (0, 7) \end{aligned}$$

78 Option (a) is correct.

Explanation:

Given differential equation:

$$\frac{d^2y}{dx^2} - \frac{3dy}{dx} + 2y = e^{5x}$$

$$\Rightarrow (D^2 - 3D + 2) y = e^{5x}$$

$$(D - 1)(D - 2) y = e^{5x}$$

From, $(D - 1)(D - 2) = 0$, $D = 1$ or 2 .

\therefore Complementary function (C. F.) $y = C_1 e^x + C_2 e^{2x}$

$$\begin{aligned} P.I &= \frac{1}{(D-1)(D-2)} \cdot e^{5x} = \left[\frac{1}{D-2} - \frac{1}{D-1} \right] \cdot e^{5x} \\ &= x^{2x} \int e^{5x} \cdot e^{-2x} dx - e^x \int e^{5x} \cdot e^{-x} dx \\ &= e^{2x} \left(\frac{e^{3x}}{3} \right) - e^x \left(\frac{e^{4x}}{4} \right) \\ &= \frac{e^{5x}}{3} - \frac{e^{5x}}{4} = \frac{e^{5x}}{12} \end{aligned}$$

Hence, equation is $y = C_1 e^x + C_2 e^{2x} + \frac{1}{12} e^{5x}$

79 Option (c) is correct.

Explanation:

Given, $\angle P = 120^\circ$

$PQ = PR$

\Rightarrow Let, $\angle Q = \angle R = x$

Now, In ΔPQR ,

$\angle P + \angle Q + \angle R = 180^\circ$ (Angle sum property)

$\Rightarrow 120^\circ + x + x = 180^\circ \Rightarrow 2x = 180^\circ - 120^\circ$

$\Rightarrow x = 30^\circ$

$\angle R = 30^\circ$

$\angle Q = 30^\circ$

80 Option (b) is correct.

Explanation:

$$\lim_{x \rightarrow 0} \frac{a^x - b^x}{x}$$

$$= \lim_{x \rightarrow 0} \frac{a^x - 1 - b^x + 1}{x}$$

$$= \lim_{x \rightarrow 0} \frac{a^x - 1}{x} - \lim_{x \rightarrow 0} \frac{b^x - 1}{x} \quad \left(\because \lim_{x \rightarrow 0} \frac{a^x - 1}{x} = \log a \right)$$

$$= \log_e a - \log_e b$$

$$= \log_e \left(\frac{a}{b} \right)$$

81 Option (b) is correct.

Explanation:

■ The visible range of solar radiation is from 400 to 700 nano-meters (nm).

■ This is the portion of the electromagnetic spectrum that can be detected by the human eye and is responsible for the colors we see in the world around us.

82 Option (c) is correct.

Explanation: Halophytes are plants that have evolved to thrive in environments with high salt concentrations in the soil, such as coastal salt marshes, estuaries, and salt flats.

83 Option (d) is correct.

Explanation: The environment is a composite state of all the biotic and abiotic factors that surround an organism or a community.

84 Option (d) is correct.

Explanation:

■ Xylem tissue is responsible for conducting water and minerals from the roots to the rest of the plant.

■ The xylem consists of specialized cells called tracheids and vessel elements that form long tubes. These tubes are interconnected and form a continuous pathway for water to move through the plant.

85 Option (c) is correct.

Explanation: Leaves are the primary site where the stimulus for flowering is received in plants. Specifically, it is the leaves that receive the photoperiodic stimulus, which is the length of the day and night. This photoperiodic stimulus is detected by specialized cells in the leaves called phytochrome.

86 Option (b) is correct.

Explanation:

■ Minerals are naturally occurring inorganic solids that have a definite chemical composition and a crystalline structure.

■ Liquids and gases are not considered minerals because they do not have a crystalline structure. However, some liquids and gases may contain minerals in solution, such as the minerals dissolved in water.

87 Option (c) is correct.

Explanation:

■ Natural systems have the ability to maintain themselves through a variety of feedback mechanisms that allow them to regulate their own processes and respond to changes in their environment.

■ This self-sustained can be seen in ecosystems, where the interactions between living and non-living components work together to maintain a stable balance.

88 Option (d) is correct.

Explanation: Genetics is the branch of biology that deals with the study of heredity and variation in living organisms. It involves the study of genes, which are the units of heredity that are passed down from one generation to the next.

89 Option (c) is correct.

Explanation: Mendel's principles of inheritance are based on the observation of patterns of inheritance of traits in sexually reproducing organisms. Mendel studied the inheritance of traits in pea plants, which reproduce sexually through the transfer of pollen from the male reproductive structures (anthers) to the female reproductive structures (stigma) of a flower.

90 Option (c) is correct.

Explanation:

■ An embryo is the earliest stage of development of a multicellular organism, starting from a single cell (the zygote) and leading to the formation of a fully developed organism.

■ In plants, the embryo is typically found inside the seed.

91 Option (d) is correct.

Explanation:

■ Loamy soils are characterized by a balanced mixture of sand, silt, and clay particles.

■ Loamy soils are considered to be some of the best soils for plant growth, as they provide a balance of the physical and chemical properties needed for healthy plant growth.

92 Option (c) is correct.

Explanation: Native elements are chemical elements that exist in nature in an uncombined or pure form, meaning that a single type of atom is present. Some examples of native elements include gold, silver, copper, sulphur, and diamond.

93 Option (a) is correct.

Explanation:

- Soil is a crucial factor in agriculture, and different types of soil have varying properties that determine their suitability for different crops.
- Clay soil is composed of fine clay particles and has a high capacity for water retention, which makes it sticky.
- The order of soil water retention capacity is clay > silt > loamy > sandy.

94 Option (d) is correct.

Explanation:

- Capillaries are small, narrow spaces or channels between soil particles that allow for the movement of water and air through the soil.
- Capillaries are most effective in loamy soils that have high porosity and water-holding capacity, such as sandy soils.

95 Option (c) is correct.

Explanation:

- Photosynthesis is a biochemical process that occurs in the chloroplasts of plant cells. Chloroplasts are specialized organelles found in the cytoplasm of plant cells and some protists.
- They contain chlorophyll and other pigments that capture light energy from the sun and convert it into chemical energy in the form of glucose.

96 Option (b) is correct.

Explanation: The drifting apart of continents is a result of tectonic activities, specifically the movement of tectonic plates.

97 Option (d) is correct.

Explanation:

- Nebulae do not belong to the solar system.
- Nebulae are vast interstellar clouds of gas and dust found in galaxies.

98 Option (b) is correct.

Explanation:

- Table salt (NaCl) is a product of a reaction between a strong acid (hydrochloric acid, HCl) and a strong base (sodium hydroxide, NaOH).
- This is known as a neutralization reaction, where an acid and a base react to form salt and water.

99 Option (c) is correct.

Explanation:

- Sexual reproduction causes genetic variation due to and shuffling of genes during meiosis.
- Shuffling of genes during meiosis results in the production of genetically diverse gametes.

100 Option (b) is correct.

Explanation: The average salinity of the ocean is 35 ppt, which is equivalent to 35 parts of salt in 1000 parts of water.

101 Option (b) is correct.

Explanation: The winner of the Mahatma Gandhi International Award for Peace and Reconciliation, 2009 was Aung San Suu Kyi.

102 Option (a) is correct.

Explanation: The 'Durand Cup' is a prestigious football tournament held in India.

103 Option (c) is correct.

Explanation: In the context of telecommunications, 2G stands for second-generation wireless telephone technology.

104 Option (d) is correct.

Explanation: The former Central Minister for Communication and Information Technology, Mr. A. Raja belongs to the Dravida Munnetra Kazhagam (DMK) party, which is a regional political party in the Indian state of Tamil Nadu.

105 Option (b) is correct.

Explanation:

- Among the given numbered Rajdhani trains, 12431 Trivandrum Central covers the longest distance.
- The Rajdhani Express trains are a series of premier trains in India that connect the national capital Delhi to major cities across the country. They are considered to be one of the fastest and most comfortable trains in India.

106 Option (b) is correct.

Explanation: For the Census of 2011, the minimum age of a person whose photographing, fingerprinting and iris mapping was done was 15 years.

107 Option (a) is correct.

Explanation:

- The Union Cabinet, in August 2010, decided to form new institutes like the All India Institute of Medical Sciences (AIIMS) in six states of India - Bihar, Chhattisgarh, Madhya Pradesh, Orissa, Rajasthan, and Uttarakhand.
- The AIIMS is a premier medical institute in India that provides world-class medical education and healthcare facilities.

108 Option (d) is correct.

Explanation: According to the 'National Election Watch' report of August 2010, the richest political party in India was the Indian National Congress (INC) party.

109 Option (c) is correct.

Explanation: The correct party-wise performance for Bihar Assembly Elections, 2010 in comparison to the elections of 2005 is + 27 + 36 - 3 2 - 7 - 5 - 1 9.

110 Option (b) is correct.

Explanation:

- Until 2010, the state governments that had provided 50 percent reservation for women in local bodies were Bihar, Madhya Pradesh, and Himachal Pradesh.

- In 1992, the 73rd and 74th Amendments to the Constitution of India were passed, which mandated 33% reservation for women in local bodies, such as Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs). However, the reservation percentage varied across states.
- Bihar was the first state to implement 50 percent.

111 Option (c) is correct.

Explanation:

- AVAHAN is the Indian segment of the Bill and Melinda Gates Foundation that is engaged in the prevention of HIV/AIDS.
- AVAHAN was launched in 2003 with the aim of reducing the spread of HIV/AIDS in India.

112 Option (d) is correct.

Explanation:

- In order to highlight the issue of rising sea levels and draw global attention towards it, the Cabinet of Maldives organized an underwater meeting.
- The islands are at risk due to climate change-induced sea-level rises that have been predicted to occur.

113 Option (a) is correct.

Explanation:

- The city that is not located on the bank of river Ganga is Fatehpur.
- Bhagalpur, Uttarkashi, and Kanpur are located on the bank of river Ganga.

114 Option (c) is correct.

Explanation:

- The right that is both a human right and a fundamental right under the Constitution of India is the Right to Education.
- The Right to Education was added to the Constitution of India as a fundamental right by the 86th Amendment in 2002.
- This amendment made it mandatory for the state to provide free and compulsory education to children aged 6 to 14 years.

115 Option (b) is correct.

Explanation:

- The time difference between Cairo and Greenwich is given as 2 hours ahead of Greenwich. This means that when it is 12:00 noon at Greenwich, it will be 2:00 PM in Cairo.
- We know that the Earth rotates 360 degrees in 24 hours, which means that it rotates 15 degrees in one hour.
- Therefore, if Cairo is 2 hours ahead of Greenwich, it must be 30 degrees east i.e., ahead of Greenwich (2 hours × 15 degrees per hour = 30 degrees).

116 Option (a) is correct.

Explanation:

- The headquarters of the International Court of Justice (ICJ) is located in The Hague, Netherlands.
- The ICJ is the principal judicial body of the United Nations (UN). It was established in 1945 and has been located in Hague since its inception.

117 Option (d) is correct.

Explanation:

- In the "World's Best Countries" list compiled by Newsweek magazine in 2010, Finland was ranked first.
- India was ranked 78th.

118 Option (c) is correct.

Explanation: In the list of '2010 Academic Rankings of the World Universities', which is also known as the Shanghai Ranking, Harvard University, USA was ranked first.

119 Option (d) is correct.

Explanation: The date that is known as "Diabetes Day" is 14th November. This day is observed globally as World Diabetes Day to raise awareness about diabetes, its prevention, and management.

120 Option (a) is correct.

Explanation: Ms. Julia Gillard became the first woman Prime Minister in the year 2010 in Australia. She served as the 27th Prime Minister of Australia from 2010 to 2013.

121 Option (b) is correct.

Explanation:

- France is the country whose parliament passed a law banning the full-face veil, including the burqa and hijab, on 14th September 2010.
- The ban came into force in April 2011, making France the first European country to ban the full-face veil in public spaces.

122 Option (b) is correct.

Explanation: Arjun Munda was able to form the government with the support of 45 MLAs in the 81-member Assembly.

123 Option (c) is correct.

Explanation: Mr. P.J. Thomas, who was appointed as the Central Vigilance Commissioner on September 7, 2010, is an IAS officer of the Kerala cadre.

124 Option (d) is correct.

Explanation:

- The Ministry of Heavy Industries and Public Enterprises of the Union Government provided financial autonomy to Mini Ratna Category I companies is 500 crores.
- In India, Mini Ratna, Maharatna, and Navratna are categories of public sector enterprises (PSUs) that are based on their size, performance, and financial strength.

125 Option (a) is correct.

Explanation:

- The Right to Education was added to the Constitution of India through the 86th Constitutional Amendment Act, 2002.
- However, it came into effect on April 1, 2010, after the government passed the Right of Children to Free and Compulsory Education Act, 2009, which outlined the provisions for free and compulsory education for children between the ages of 6 and 14.

126 Option (c) is correct.

Note: According to BPSC, answer is (b), but it should be (c).

Explanation:

- In November 2010, India participated in the XVI Asian Games held in Guangzhou, China, with Gagan Narang leading the contingent.

■ The team's performance was outstanding, securing a total of 65 medals, including 14 Gold, 17 Silver and 34 Bronze medals which was the country's second-best performance in the history of the Asian Games since its inception in 1951.

127 Option (a) is correct.

Explanation: Shubha Tole, the first woman awardee of the prestigious Shanti Swarup Bhatnagar Prize in the field of Science in 2010, belongs to the Tata Institute of Fundamental Research (TIFR) in Mumbai, India.

128 Option (c) is correct.

Explanation:

■ Dr. Manmohan Singh, the former Prime Minister of India, was honoured with the 'World Statesman Award, 2010'.

■ The award was presented to him by the Appeal of Conscience Foundation, a New York-based interfaith organization that promotes religious freedom, human rights, and tolerance.

129 Option (a) is correct.

Explanation:

■ India's third research centre at Antarctica is named "Bharati". The Bharati research station is located in the Larsemann Hills region of East Antarctica, and it was established in 2012.

■ The station is designed to conduct research in a range of fields, including glaciology, atmospheric science, earth science, and marine biology.

130 Option (b) is correct.

Note: According to BPSC, answer is (d), but it should be (b).

Explanation:

■ The number of medals awarded to team events, women, and men are 2, 35, and 64, respectively.

■ In 2010, the city of Delhi in India played host to the Commonwealth Games from 3rd to 14th October.

131 Option (b) is correct.

Explanation:

■ The Harappan Civilization, also known as the Indus Valley Civilization, existed from around 2600 BCE to 1900 BCE in the northwestern region of the Indian subcontinent.

■ It was a highly advanced urban civilization with sophisticated systems of town planning, writing, trade, and commerce.

■ Out of the given options, the Harappan port is Lothal, which is located in Gujarat, India.

■ Lothal was an important center of trade and commerce for the Harappan civilization, and its location on the banks of the river Sabarmati made it a natural port.

132 Option (c) is correct.

Explanation:

■ The Gupta dynasty was one of the most prosperous and powerful dynasties of ancient India, which ruled over a large part of the Indian subcontinent from the 4th to 6th century CE. The Gupta empire is known for its great achievements in the fields of art, literature, mathematics, and astronomy.

■ The Gupta emperor who defeated the Huna tribe was Skandagupta.

■ The Huna tribe was a nomadic tribe from Central Asia, which invaded and attacked India during the 5th century CE.

133 Option (d) is correct.

Explanation:

■ The name of Kalhana's book is "Rajatarangini". Kalhana was a historian and writer who lived in the 12th century CE in the Kashmir region of India.

■ The book is also an important source of information about the political and cultural history of the Kashmir region, and it has been translated into several languages.

134 Option (a) is correct.

Explanation:

■ The inscription that tells about the various achievements of Rudradaman I is the Junagadh inscription.

■ Rudradaman I was a ruler of the Western Kshatrapas, a dynasty that ruled over the western and central parts of India 130 AD–150 AD.

135 Option (a) is correct.

Explanation:

■ The first ruler of the Slave dynasty was Qutubuddin Aibak.

■ The Slave dynasty, also known as the Mamluk dynasty, was a Muslim dynasty that ruled over parts of India from 1206 to 1290 CE.

■ The dynasty was founded by Qutubuddin Aibak, who was a former slave of Muhammad Ghori, the ruler of the Ghurid Empire in Afghanistan.

136 Option (b) is correct.

Explanation:

■ The ruler of Devgiri at the time of Alauddin Khalji's invasion was Ramchandra Dev.

■ Alauddin Khalji was a ruler of the Khalji dynasty, which ruled over the Delhi Sultanate in India from 1290 to 1320 CE.

■ Alauddin Khalji launched an invasion of Devgiri in 1294 CE and besieged the city for several months. Despite putting up a strong resistance, Ramchandra Dev was eventually defeated and captured by the forces of Alauddin Khalji.

137 Option (d) is correct.

Explanation: Akbar, the third Mughal emperor of India, abolished the pilgrimage tax on non-Muslims in 1563.

138 Option (b) is correct.

Explanation:

■ Dar-ul-Shafa was a free hospital established by Firoz Shah Tughlaq, who was a Sultan of the Tughlaq dynasty in India, in the 14th century.

■ The hospital was built in Delhi and was meant to provide free medical treatment to people, regardless of their religion, social status or financial condition.

139 Option (a) is correct.

Explanation:

■ The 'Permanent Settlement' was a land revenue system introduced by Lord Cornwallis, who was the Governor-General of India, in 1793. This system was made with the Zamindars or the landlords of the region.

- Under the Permanent Settlement, the zamindars were given the right to collect revenue from the peasants in their respective estates or zamindaris.
- In return, the zamindars were required to pay a fixed amount of revenue to the British government.

140 Option (a) is correct.

Explanation:

- Atmaram Pandurang was the founder of the 'Prarthana Samaj'. Prarthana Samaj was a socio-religious reform movement that emerged in Bombay (now Mumbai) in the 19th century.
- He founded the Prarthana Samaj in 1867 with the objective of promoting monotheism, social reform, and the worship of a single God.

141 Option (d) is correct.

Explanation:

- Raja Ram Mohan Roy is considered as the father of the Indian Renaissance.
- He was a social reformer, religious thinker, and a founder of the Brahmo Samaj, which was a socio-religious reform movement that aimed to promote monotheism, social reform, and women's rights.

142 Option (d) is correct.

Explanation:

- The 'Swaraj Party' was founded by Chittaranjan Das and Motilal Nehru.
- The party was established in 1923 after a split in the Indian National Congress, and it aimed to push for complete self-government or 'Swaraj' for India.

143 Option (a) is correct.

Explanation:

- The 'Theosophical Society' was founded by Madame Helena Petrovna Blavatsky, along with Henry Steel Olcott and William Quan Judge in New York in 1875.
- The Theosophical Society aimed to promote the study of comparative religion, philosophy, and science, and to explore the mysteries of human consciousness and the universe.

144 Option (b) is correct.

Explanation:

- "Gita Rahasya" is a philosophical work written in Marathi by Bal Gangadhar Tilak, a prominent Indian nationalist and social reformer.
- The book is considered a seminal work in the history of Indian philosophy and has had a significant impact on Indian thought and culture.

- Tilak's interpretation of the Bhagavad Gita helped to shape the nationalist discourse in India and inspired many to fight for India's independence from British colonial rule.

145 Option (a) is correct.

Explanation:

- Mahaveer Swami, also known as Lord Mahaveer or Vardhaman Mahaveer, was born in Kundagram.
- Mahaveer Swami was born in 599 BCE to King Siddhartha and Queen Trishala, who were part of the Kshatriya clan.

146 Option (c) is correct.

Explanation:

- Mahatma Buddha's 'Mahaparinirvan' took place in Kushinagar, which is located in present-day Uttar Pradesh, India.
- Mahaparinirvan is a term used to describe the death of Buddha.

147 Option (b) is correct.

Explanation: Mahatma Buddha gave his first 'Dharmachakrapravartan' or the first turning of the wheel of dharma at Sarnath, which is located in present-day Uttar Pradesh, India.

148 Option (c) is correct.

Explanation:

- The early capital of Magadh was Rajagriha, also known as Girivraja. Magadh was an ancient kingdom in India that existed from the 6th century BCE to the 4th century CE.
- Rajagriha was the capital city of Magadh during the reign of Bimbisara, who was one of the most powerful kings of Magadh.

149 Option (b) is correct.

Explanation: Ajatashatru was a ruler of the ancient kingdom of Magadh in India during the 5th century BCE. He was the son of King Bimbisara, who belonged to the Haryanka dynasty, and succeeded his father as the king of Magadh.

150 Option (d) is correct.

Explanation:

- The Third Buddhist Council was convened at Pataliputra, the capital of the Mauryan Empire, in the 3rd century BCE.
- This council was organized by the Mauryan emperor Ashoka, and its purpose was to purify the Buddhist Sangha (community) from the corruption that had crept in.

