

READ INSTRUCTIONS BEFORE FILLING ANY DETAILS OR ATTEMPTING TO ANSWER THE QUESTIONS.

Booklet Sr. No. _____



Question
Booklet Set

Candidate's Name _____

Father's Name _____

Date of Birth :
D D M M Y Y Y Y

C

OMR Response Sheet No. _____ Roll No. _____

Candidate's Signature : _____
(Please sign in the box)

Total Questions : 120
Time Allowed : 2 Hours

INSTRUCTIONS

1. The candidate shall NOT open this booklet till the time he/she is told to do so by the Invigilation Staff. However, in the meantime, the candidate can read these instructions carefully and subsequently fill the appropriate columns given above in CAPITAL letters. The candidate may also fill the relevant boxes out of 1 to 9 of the Optical Mark Reader (OMR) response sheet, supplied separately.
2. Use only blue or black **ball point pen** to fill the relevant columns on this page as well as in the OMR sheet. Use of ink pen or any other pen is not allowed.
3. The candidate shall be liable for any adverse effect if the information given above is wrong or illegible or incomplete.
4. Each candidate is required to attempt 120 questions in 120 minutes, except for orthopedically/visually impaired candidates, who would be given 40 extra minutes, for marking correct responses on the OMR sheet.
5. The question paper booklet has **24** pages.
6. The candidates, when allowed to open the question paper booklet, must first check the entire booklet to confirm that the booklet has complete number of pages, the pages printed correctly and there are no blank pages. In case there is any such error in the question paper booklet then the candidate should IMMEDIATELY bring this fact to the notice of the Invigilation Staff and obtain a new booklet of the same series as given earlier.
7. The serial number of the new Question booklet if issued for some reason should be entered in the relevant column of the OMR. The Invigilation Staff must make necessary corrections in their record regarding the change in the serial no. of Question booklet.
8. The paper consists of total 480 Marks. Each question shall carry 4 marks. There are four options for each question and the candidate has to mark the MOST APPROPRIATE answer on the OMR response sheet.
9. There is negative marking (1 mark for each question) for questions wrongly answered by the candidate.
10. Use of Electronic/Manual Calculator is prohibited.
11. The candidate **MUST READ INSTRUCTIONS BEHIND THE OMR SHEET** before answering the questions and check that two carbon copies attached to the OMR sheet are intact.

SECTION I

1. Ever-rising emission of greenhouse gases is considered as the major cause of global warming and climate change. Which of the following statements is correct with respect to the greenhouse effect in the atmosphere ?
 - (a) Absorption and re-emission of visible light by the atmosphere.
 - (b) Absorption and re-emission of visible light by clouds.
 - (c) Absorption and re-emission of ultraviolet radiation by the atmosphere.
 - (d) Absorption and re-emission of infrared radiation by the atmosphere.
2. Which of the following crop genome was the first to be sequenced ?
 - (a) Rice
 - (b) Maize
 - (c) Wheat
 - (d) Sugarcane
3. UPOV refers to which of the following ?
 - (a) The International Union for the Protection of New Breeds of Animals
 - (b) The International Union for the Protection of New Strains of Microbes
 - (c) The International Union for Conservation of Nature
 - (d) The International Union for the Protection of New Varieties of Plants
4. Which of the following are energy foods ?
 - (a) Carbohydrates and Fats
 - (b) Proteins and Mineral salts
 - (c) Vitamins and Minerals
 - (d) Water and Roughage
5. Which is the first enzyme that mixes with food ?
 - (a) S. Amylase
 - (b) Trypsin
 - (c) Erepsin
 - (d) Gastric juice
6. With reference to “*Supercomputer*”, which of the following statements is/are correct ?
 1. Performance of supercomputer is measured in “Floating-Point Operations Per Second (FLOPS)”.
 2. Performance of supercomputer is measured in “Million Instructions Per Second (MIPS)”.
 3. “PARAM 8000” is a supercomputer.
 - (a) 1 only
 - (b) 2 only
 - (c) 1 and 3 only
 - (d) 2 and 3 only

7. Through email an unauthorized person asks about the details of the credit card and personal identification number (PIN). What kind of cyber attack is this ?
- (a) Virus signing
 - (b) Skimming
 - (c) Phishing
 - (d) Spamming
8. Sustainable development refers to one of the following :
- (a) Long lasting development without impacting environment negatively
 - (b) Economic decisions are taken focusing on the growth
 - (c) Economic decisions are taken based on the demand and supply forces
 - (d) GDP increases owing to increase in general price level
9. The first Robot citizen, a humanoid robot is named as
- (a) Rocky
 - (b) Stefan
 - (c) Sophia
 - (d) Kitty
10. Eastern Waterways Connectivity Transport Grid (EWaCTG) Project aims to provide seamless connectivity for regional integration of five countries
- (a) India, Nepal, Bhutan, Bangladesh and Afghanistan
 - (b) India, Nepal, Bhutan, Afghanistan and Myanmar
 - (c) India, Nepal, Bhutan, Bangladesh and Myanmar
 - (d) India, Sri Lanka, Maldives, Bangladesh and Myanmar
11. Which institution launched the 'Fast and Secured Transmission of Electronic Records' (FASTER) digital platform ?
- (a) Reserve Bank of India
 - (b) Supreme Court of India
 - (c) Election Commission of India
 - (d) Central Bureau of Investigation
12. Indian Navy commissioned the new naval station INS Kohassa in Andaman and Nicobar Islands which has been named after
- (a) *Centropus andamanensis*
 - (b) White-Bellied Sea Eagle
 - (c) Andaman serpent-eagle
 - (d) *Caprimulgus andamanicus*

13. Which country has proposed to ban the sale of petrol and diesel vehicles from the year 2030 ?
- Sweden
 - UK
 - European Union
 - New Zealand
14. What is the name of the Joint Military Exercise that involves Indian Navy, Indian Army, Indian Air Force and Indian Coast Guard ?
- Sagar Anveshika
 - Asmi
 - Sea Vigil – 21
 - Sagar Kavach
15. IWWAGE refers to
- Initiative for Waste Water Amelioration and Green Ecology
 - Initiative for What Works to Advance Women and Girls in the Economy
 - Initiative for Worldwide Adaptation of Global Endemic Species
 - Initiative of Wind and Weather Assessment for Good Ecosystems
16. Territories of which of the following do **not** touch the Dead Sea ?
- Lebanon
 - Jordan
 - Israel
 - Palestine

17. Consider the following statements :
- CryptoWire, a global crypto super app that is a special business unit of Ticker Plant, announced the launch of India's first index of Crypto-currencies — IC15, which is a rule-based broad market index by market capitalisation.
 - The IC15 tracks and measures the performance of the top 15 widely traded liquid crypto-currencies listed on leading crypto exchanges of the world, the company stated.
- Which of the above statements is/are correct ?
- 1 only
 - 2 only
 - Both 1 and 2
 - None of the above
18. _____ has surpassed US chipmaker Intel to become the world's leading chipmaker by revenue in 2021.
- Lenovo Electronics
 - Samsung Electronics
 - Vivo Electronics
 - Sony Electronics
19. _____ has overtaken China to become India's top trading partner in 2021 – 22, reflecting strong economic ties between the two countries.
- Russia
 - USA
 - UAE
 - Canada

20. On which of the following will the Indian Space Research Organisation send a spacecraft to orbit, in 2024, to study what lies below its surface ?

1. Mars
 2. Venus
 3. Jupiter
 4. Saturn
- (a) 1 only
(b) 2 only
(c) 3 only
(d) 4 only

21. Consider the following statements :

1. The Davis Cup 2021 was won by the Russian Tennis Federation by a 2-0 lead over Croatia in the Davis Cup final in Madrid.
2. Medvedev defeated Marin Cilic in the second singles match to give Russia an insurmountable 2-0 lead over Croatia and its first Davis Cup title since 2006.
3. Croatia also was seeking its third title after triumphs in 2005 and 2018.
4. Casper was named the Most Valuable Player.

Which one of the above statements are correct ?

- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 2 and 3 only
(d) All of the above

22. Consider the following statements :

1. Assamese poet Nilmani Phookan Jr won the 56th Jnanpith Award and Konkani novelist Damodar Mauzo won the 57th Jnanpith Award.
2. India's highest literary award, the Jnanpith is bestowed on writers for "their outstanding contribution to literature".
3. Jnanpith Award is a literary award presented by the Bharatiya Jnanpith organisation to Indian writers every year.
4. This was instituted in 1950 and is given only to the world writers who write in Indian languages and English.

Which of the above statements are correct ?

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

23. Consider the following statements :

1. Mahi River is the only river in India that cuts the Tropic of Cancer twice.
2. Bhopal and Gandhinagar are also located fairly close to the "Tropic of Cancer".
3. The Tropic of Cancer passes through 20 countries, 3 continents, 8 water bodies.

Which of the above statements is/are correct ?

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

- 24.** Which among the following is the world's highest island ?
- Hawaii
 - Borneo
 - New Guinea
 - Sumatra
- 25.** Consider the following statements :
- The UN General Assembly (UNGA) recently passed a resolution that recognises Healthy Environment as a Human Right.
 - As per the resolution, right to a clean, healthy and sustainable environment has become a human right.
 - UN General Assembly passed the resolution on July 28, 2022.
 - India has voted against this resolution.
- Which of the above statements are correct ?
- 1 and 2 only
 - 3 and 4 only
 - 1, 2 and 3 only
 - All of the above
- 26.** _____ will hold the Presidency of the G20 from 1st December, 2022 to 30th November, 2023 and the G20 Summit will be held in 2023.
- India
 - Brazil
 - Russia
 - Singapore
- 27.** Recently the Hyderabad Declaration was in the news due to which of the following ?
- E-Governance
 - Health
 - Education
 - Equity
- 28.** Consider the following statements :
- GST was passed as the 101st Amendment Act. It came into force on 1st July, 2017.
 - Germany is the first country to introduce GST.
 - Amitabh Bachchan is the brand ambassador to promote Goods and Services Tax.
- Which of the above statements are correct ?
- 1 and 2 only
 - 1 and 3 only
 - 1, 2 and 3
 - None of the above
- 29.** The Board of Cooperative Societies may be superseded or kept under suspension in which of the following cases ?
- Of its persistent default.
 - Of negligence in the performance of its duties.
 - Of there being a stalemate in the constitution or functions of the Board.
- Which of the above statements is/are correct?
- 1 only
 - 2 and 3 only
 - 1, 2 and 3 only
 - None of the above

30. _____ has been named the World's Best Airport for the second year ?
- (a) Qatar's Hamad International Airport
 - (b) Indira Gandhi International Airport
 - (c) France International Airport
 - (d) Paris International Airport

31. What is the objective of PURA Scheme ?
- (a) To provide employment opportunities in rural areas
 - (b) To provide urban amenities in rural areas
 - (c) To provide tool kits to artisans in rural areas
 - (d) To provide housing facilities to marginalized

32. Which Ministry(ies) launched the Kisan Sarathi Digital Platform ?
1. Ministry of Agriculture
 2. Ministry of Electronics and Information Technology
 3. Ministry of Power
 4. Ministry of Drinking Water and Sanitation

Select the correct answer from the code given below :

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

33. When the Reserve Bank of India announces an increase of the Cash Reserve Ratio, what does it mean ?
- (a) The commercial banks will have more money to lend
 - (b) The commercial banks will have less money to lend
 - (c) The Reserve Bank of India will have less money to lend
 - (d) The Union Government will have less money to lend

34. Consider the following statements regarding the Scheduled Co-operative Banks :
1. Unlike commercial banks, Scheduled Co-operative Banks are not regulated by RBI.
 2. In the event Co-operative Banks fail, deposits with them are covered by the Registrar of Co-operative Societies either under the State or Central government.
 3. Co-operative Banks are structured as cooperatives, with their members carrying unlimited liability.

Which of the above statements is/are *incorrect* ?

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

35. The Shanta Kumar Committee is related to
- (a) Suggest measures to achieve an efficient administration for the country at all levels of the government.
 - (b) Suggest measures towards doubling farmer's real income.
 - (c) Restructuring and reforms of Food Corporation of India.
 - (d) Review the Defence Procurement Procedure (DPP), 2016.

- 36.** Consider the following events in the history of British India :
1. Santhal Rebellion
 2. Indigo Revolt
 3. Sanyasi Rebellion
 4. Munda Rebellion
- Which one of the following is the correct chronological sequence of the above events starting with the earliest ?
- (a) 3, 1, 2, 4
 - (b) 3, 2, 1, 4
 - (c) 1, 4, 2, 3
 - (d) 2, 1, 4, 3
- 37.** Under whose leadership was a mission sent to Kabul by Lord Auckland ?
- (a) Alexander Burnes
 - (b) Bogle
 - (c) Pemberton
 - (d) None of the above
- 38.** In the Battle of Plassey in 1757, Siraj-ud-Daulah was defeated by the English East India Company mainly due to the treachery of his Commander-in-Chief. What was the name of the Commander-in-Chief ?
- (a) Mir Jafar
 - (b) Mir Qasim
 - (c) Begum of Oudh
 - (d) Reza Khan
- 39.** Who founded and edited the three important papers i.e., The Punjabi, Vande Mataram and The People ?
- (a) Pattabhi Sitaramayya
 - (b) Annie Besant
 - (c) Subramania Iyer
 - (d) Lala Lajpat Rai
- 40.** Arrange the following events during the period 1944 to 1947 in correct chronological order (from the earliest to the latest) :
1. Clement Attlee's June, 1948 deadline for India's Independence
 2. Direct Action Day proclaimed by Jinnah
 3. Congress led interim government formed at the Centre with Jawaharlal Nehru as the Prime Minister of United India
 4. Mountbatten Plan
- (a) 2, 3, 1, 4
 - (b) 4, 3, 2, 1
 - (c) 1, 2, 3, 4
 - (d) 3, 4, 1, 2
- 41.** Name the celebrated Chinese pilgrim who visited the royal palace of Chandragupta II.
- (a) Hiuen-Tsang
 - (b) Fahien
 - (c) Wang-hiuen-tse
 - (d) Chou En-lai

42. Muhamad-bin-Tughluq set up a new department called 'Diwan-i-Kohi' for the progress and development of
- Villages
 - Cities/Towns
 - Agriculture
 - Industries
43. In which of the following hills of Odisha is Hathigumpha inscription of Kharavela present ?
- Mahendragiri
 - Khandagiri
 - Udayagiri
 - Goradhgiri
44. On which riverside of Punjab was the ancient Greek settlement 'Boukephala' situated ?
- Ravi
 - Chenab
 - Jhelum
 - Beas
45. Firdausi, the writer of Shah-nama, was the poet laureate of the court of which ruler ?
- Mahmud Ghaznavi
 - Muhammad Ghori
 - Iltutmish
 - Alauddin Khilji
46. The ruler who gave permission to East India Company for establishing a factory at Surat was
- Akbar
 - Farrukhsiyar
 - Shah Jahan
 - Jahangir
47. Which of the following European trading companies adopted the 'Blue Water Policy' in India ?
- Dutch Company
 - French Company
 - British East India Company
 - Portuguese Company
48. Who among the following wrote "Pagri Sambhal Jatta" ?
- Ajit Singh
 - Bhagat Singh
 - Banke Dayal
 - None of the above
49. To which village did the great Sikh warrior woman Mai Bhago belong ?
- Guru Ki Wadali
 - Jhabal
 - Muktsar
 - Kartarpur

50. On which river was Khanki Headworks built, which irrigated 3 million acres of barren lands in west Punjab during the British period ?

- (a) Ravi
- (b) Chenab
- (c) Jhelum
- (d) Sind

51. Who among the following died during hunger strike by Bhagat Singh and his associates in jail ?

- (a) Jatin Das
- (b) Shiv Verma
- (c) Khudiram
- (d) Master Amir Chand

52. Arrange the following in chronological order :

- 1. Communal Award
- 2. Simon Commission
- 3. Cabinet Mission
- 4. Wavell Plan

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

53. Match the following works with its writers :

- | | |
|------------------------|----------------|
| i. Jaswant Singh Kawal | 1. Buhe |
| ii. Amrita Pritam | 2. Pinjar |
| iii. Sant Singh Sekhon | 3. Lahoo Di Lo |
| iv. Mohan Singh | 4. Lahu Mitti |

Codes :

- (a) i-3, ii-2, iii-4, iv-1
- (b) i-2, ii-1, iii-4, iv-3
- (c) i-2, ii-3, iii-1, iv-4
- (d) i-1, ii-4, iii-3, iv-2

54. Identify the historical site that does **not** exist in the Indian Punjab.

- (a) Aam Khas Bagh
- (b) Rohtas Fort
- (c) Khairuddin Masjid
- (d) Bahadurgarh Fort

55. Which of the following is **not** the folk instrument of Punjab ?

- (a) Dilruba
- (b) Chimta
- (c) Ravanhatha
- (d) Algoza

56. How many districts of Punjab share a border with Pakistan ?

- (a) 8
- (b) 7
- (c) 4
- (d) 6

57. Winter Diesel is a specialized fuel that was introduced by Indian Oil Corporation. Choose the correct statement about Winter Diesel :

- (a) It contains additives to maintain lower viscosity, can be used in temperatures as low as -100°C .
- (b) It has lower cetane rating.
- (c) It has high Sulphur content.
- (d) It is specifically used for high altitude regions and low-temperature regions such as Ladakh, where ordinary diesel can become unusable.

58. An Appropriation Bill as passed by the Lower House

- 1. is discussed by the Rajya Sabha.
- 2. is modified by the Rajya Sabha.
- 3. is rejected by the Rajya Sabha.
- 4. is passed by the Rajya Sabha.

Which of the statements given above is/are correct ?

- (a) All are correct
- (b) 1 and 4 are correct
- (c) 2 and 4 are correct
- (d) 2 and 3 are correct

59. The function of the Public Accounts Committee is to

- 1. See that the amounts shown in the accounts as having been disbursed were legally available for and applicable to the service or purpose for which they have been applied or charged.
- 2. See that the expenditure conforms to the authority which governs it.
- 3. See that every re-appropriation has been made in accordance with the provisions made in this behalf under the rules framed by competent authority.
- 4. Consider the report of the Comptroller and Auditor General in cases where the President may have required him to conduct an audit of any receipts or to examine the accounts of stores and stocks.

Which of the statements given above is/are correct ?

- (a) Only 1 is correct
- (b) 2 and 3 are correct
- (c) 1, 2, 3 are correct
- (d) All are correct

- 60.** In connection to Government of India Act, 1935 consider the following statements :
1. The Act came into effect in 1937.
 2. The Act laid down that the High Court would be composed of at least three judges of whom one would be Chief Justice.
 3. The Act ensured the provisions of all India Civil Services.
 4. According to the Act, the Governor General is only required to act according to the advice of the Council of Ministers.

Which of the statements given above are correct ?

- (a) 1, 2 and 4 only
- (b) 1, 2 and 3 only
- (c) 1 and 4 only
- (d) All the statements are correct

- 61.** Match List-I with List-II and select the correct answer :

List I

List II

- | | |
|-------------------|-----------------------------------|
| A. Lord Clive | 1. Subsidiary Alliance |
| B. Lord Wellesley | 2. Indian Universities Commission |
| C. Lord Dalhousie | 3. Doctrine of Lapse |
| D. Lord Curzon | 4. Dual Government in Bengal |

Choose your answer with the help of the given options :

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

- 62.** Which among the following is *not* a World Bank unit ?

- (a) International Finance Corporation
- (b) International Monetary Fund
- (c) International Development Association
- (d) Multilateral Investment Guarantee Agency

- 63.** Marshall Plan was a US Programme providing economic assistance to Western Europe following the destruction of World War-II. Who was the US President during the Marshall Plan ?

- (a) Dwight Eisenhower
- (b) Franklin D. Roosevelt
- (c) Woodrow Wilson
- (d) Harry S. Truman

- 64.** NAFTA (North American Free Trade Agreement) was replaced by a new trade agreement in 2020 called

- (a) Panama Treaty Agreement
- (b) USMCA (United States-Mexico-Canada Agreement)
- (c) Southern Common Market Agreement (Mercosur)
- (d) CACM (Central American Common Market)

65. With reference to Self-Help Groups (SHGs), consider the following statements :

1. A Self-Help Group is an organization of the rural poor formed through social mobilization for the purpose of their betterment and poverty eradication.
2. Self-Help Groups are non-governmental organizations at Panchayat levels to assist the local administration in rural development.

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

66. Correctly arrange the following islands of India from North latitude to South latitude.

1. Neil Island (Shaheed Dweep)
2. Ross Island (Netaji Subhas Chandra Bose Island)
3. Havelock Island (Swaraj Dweep)
4. Barren Island

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

67. Which of the following are correct about the immigration laws in India ?

1. A person who was born in India shall be considered citizen of the country.
2. Either of whose parents are born in India shall be considered a citizen of the country.
3. A person who has been ordinarily resident living in the Indian Territory for not less than 5 years shall be considered a citizen of India.
4. Those who have invested a sum of ₹ 5 crores in India shall be considered a citizen of India.

- (a) 1, 2, 3 and 4 are correct
- (b) 1 and 4 are correct
- (c) 1, 2 and 4 are correct
- (d) 1, 2 and 3 are correct

68. Match the following :

Agriculture and Allied Revolution

Father of Revolution in India

A. Green

1. Nirpakh Tutej

B. White

2. M.S.

Swaminathan

C. Blue

3. Arun Krishnan

D. Golden

4. Verghese

Kurien

Codes :

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

- 69.** Which of the following is the name of a wildlife corridor ?
- Rohtang Pass
 - Chilla-Motichur
 - Indira Gandhi Canal, Rajasthan
 - Binsar
- 70.** Blue-green algae are chiefly used as biofertilisers in the crop of
- Maize
 - Wheat
 - Paddy
 - Gram
- 71.** The maximum tidal energy potential in India is
- in Gulf of Khambhat
 - in Gangetic delta in Sundarbans
 - along the coast of Odisha
 - along the coast of Chennai
- 72.** In the Sustainable Development Goals, 2030 (SDGs 2030) – which goal is pertinent to “*make cities and human settlements inclusive, safe, resilient and sustainable*” ?
- Goal 11
 - Goal 12
 - Goal 13
 - Goal 14
- 73.** Which of the following is a landmark international agreement designed to protect the stratosphere ozone layer ?
- The Stockholm Declaration
 - The Montreal Protocol
 - The Geneva Convention
 - The Bern Convention
- 74.** What is the name of a species that is highly connected to the entire food web and whose loss may result in ecosystem collapse ?
- Limiting species
 - Keystone species
 - Vital species
 - Top species
- 75.** The Western Ghats of India are also known as
- Nilgiris
 - Sahyadris
 - Annamalai Hills
 - Cardamom Hills
- 76.** Atlantic Ocean gets its cold, deep water from the Arctic Ocean, whereas the Pacific and Indian Oceans get theirs from the water surrounding Antarctica. This is a result of which of the following phenomenon ?
- El Niño
 - La Niña
 - Ocean Conveyer Belt
- Choose the correct answer from the options given below :
- 1 only
 - 2 only
 - 3 only
 - 1 and 2 only

77. Which of the following is correctly matched ?

1. Prithvi – surface-to-air missile
 2. Trishul – surface-to-surface missile
 3. Nag – anti-tank missile
 4. Pinaka – light combat aircraft
- (a) 3 only
 (b) 2 and 3 only
 (c) 1 only
 (d) 4 only

78. A solar eclipse occurs when a portion of the Earth is engulfed in a shadow cast by the Moon which fully or partially blocks sunlight. At which phase of the Moon do solar eclipses occur ?

- (a) Full
 (b) New
 (c) First quarter
 (d) Third quarter

79. NASA is participating in new international missions to Mars. The 2022 ExoMars Rover and Surface Platform will help understand if

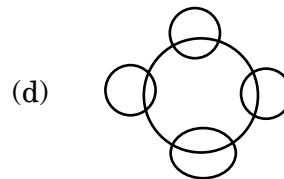
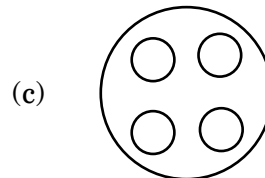
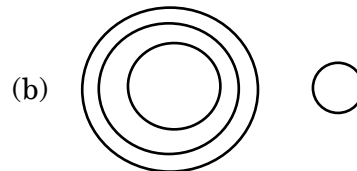
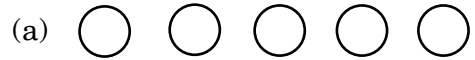
- (a) life ever existed on Mars
 (b) water can be collected from Mars
 (c) minerals can be extracted from Mars
 (d) None of the above

80. LPG used in domestic set-ups in kitchens is actually which of the following gas ?

- (a) Methane/Carbon dioxide
 (b) Hydrogen/Oxygen
 (c) Butane/Propane
 (d) Oxygen/Methane

SECTION II

81. Which of the following diagrams indicate the best relation between passengers, train, bus, taxi and auto rickshaw ?



82. If 'P' means '+'; 'R' means '×'; 'S' means '-'; 'T' means '÷', then what is the value of

$$5 R 9 P 7 S 9 T 3 P 6 = ?$$

- (a) 54
 (b) 128
 (c) 55
 (d) 59

83. Select the option that will fill in the blank and complete the given series.
0, 7, 26, 63, 124, 215, 342, 511, 728, __
(a) 990
(b) 1000
(c) 1001
(d) 999
84. In a class 40% of the students enrolled for Math and 70% enrolled for Economics. If 15% of the students enrolled for both Math and Economics, what percentage of the students of the class did not enrol for either of the two subjects ?
(a) 5%
(b) 15%
(c) 25%
(d) None of the above
85. A father has divided his properties in such a way that $\frac{1}{2}$ of the total properties go to A, $\frac{2}{3}$ rd of the remaining are shared equally between B, C and D and the rest go to E, F, G and H equally such that each gets ₹ 30,000. Then how much amount does D get ?
(a) ₹ 68,000
(b) ₹ 24,000
(c) ₹ 80,000
(d) ₹ 72,000
86. A watch, which gains 5 seconds in 3 minutes, was set right at 7 a.m. In the afternoon of the same day, when the watch indicates quarter past 4 o'clock, the true time is
(a) 6 p.m.
(b) 5 p.m.
(c) 4 p.m.
(d) 3 p.m.
87. Pointing to a portrait, a lady tells her friend, "He is the grandson of the elder brother of my father." How is the boy in the photograph related to this woman ?
(a) Nephew
(b) Brother
(c) Uncle
(d) Brother-in-law
88. What is the difference between the speed of second hand and minute hand of a clock in degrees per second ?
(a) $\frac{1}{10}$ degrees per second
(b) 6 degrees per second
(c) $\frac{59}{10}$ degrees per second
(d) 36 degrees per second
89. Friday falls on 7th December, 2007. What day of the week was it on 9th March, 2008 ?
(a) Saturday
(b) Sunday
(c) Monday
(d) Tuesday

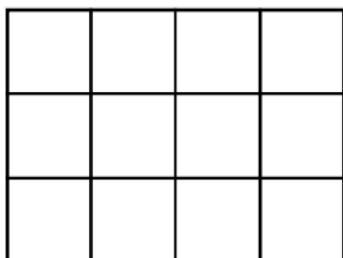
- 90.** The average height of 5 people in a room is 160 cm. A sixth person with height 172 cm enters the room. The average height of the 6 people in the room is
- (a) 166 cm
 - (b) 164.50 cm
 - (c) 163.33 cm
 - (d) 162 cm
- 91.** A student scored 30% marks in the first paper of Physics out of 180 marks. He has to get an overall score of at least 50% in two papers. The second paper is carrying 150 marks. The percentage of marks he should score in the second paper to get the overall average score is
- (a) 80%
 - (b) 76%
 - (c) 74%
 - (d) 70%
- 92.** In a certain code ORGANISE is written as BHSPDRHM. How is DESTINED written in that code ?
- (a) SRDCCDMH
 - (b) UTFECDMH
 - (c) UTFEEFMH
 - (d) None of the above
- 93.** The age of a man is three times the sum of ages of his two sons and five years later his age will be double the sum of their ages. What is the father's present age ?
- (a) 47 years
 - (b) 45 years
 - (c) 42 years
 - (d) 49 years
- 94.** B, C and D are located at different directions from A. While it takes 30 hours to reach B from A; C and D are 15 and 20 hours away from A. B and C are 50 and 20 hours respectively from D, while the travel from B to C will take 40 hours. Which of the following statements is true ?
- (a) The time taken to travel from A to B is same as that taken to travel between D and C.
 - (b) It takes double the time to reach B from D as it takes to reach B from A.
 - (c) The time taken to reach C from B is double that of the time taken to reach C from D.
 - (d) Travelling time to reach B from A through C is less than the travelling time taken to reach B from D.

95. If $u > t$, $r > q$, $s > t$, and $t > r$, which of the following must be true ?

1. $u > s$
2. $s > q$
3. $u > r$

- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) None of the above

96. Find the number of squares in the given figure :



- (a) 18
(b) 12
(c) 20
(d) None of the above

97. A snail is at the bottom of a 20 meter deep pit. Every day the snail climbs 5 meters upwards, but at night it slides 4 meters back downwards. How many days does the snail take to reach the top of the pit ?

- (a) 20 days
(b) 18 days
(c) 17 days
(d) 16 days

98. Pipe A fills a tank of 700 litres capacity at the rate of 40 litres a minute. Another pipe B fills the same tank at the rate of 30 litres a minute. A pipe at the bottom of the tank drains the tank at the rate of 20 litres a minute. If pipe A is kept open for a minute and then closed and pipe B is kept open for a minute and then closed and then pipe C is kept open for a minute and then closed and the cycle repeated, how long will it take for the empty tank to overflow ?

- (a) 42 minutes
(b) 39 minutes
(c) 40 minutes 33 seconds
(d) None of the above

99. What least number must be added to 1056, so that the sum is completely divisible by 23 ?

- (a) 2
- (b) 3
- (c) 18
- (d) 21

100. There are five books A, B, C, D and E placed on a table. If A is placed below E, C is placed above D, B is placed below A and D is placed above E, then which of the following books touches the surface of the table ?

- (a) C
- (b) B
- (c) A
- (d) E

101. Write the following in a logical sequence :

Lock, Door, Key, Switch on, Room
1 2 3 4 5

- (a) 3, 1, 2, 5, 4
- (b) 5, 4, 3, 1, 2
- (c) 1, 2, 3, 5, 4
- (d) 4, 5, 2, 1, 3

102. A, B and C can do a piece of work in 12 days, 15 days and 20 days respectively. A and C left 3 days before the completion of the work. In how many days will the work be completed ?

- (a) 5 days
- (b) 7 days
- (c) 10 days
- (d) 12 days

103. Ramesh has a certain number of mangoes. If three mangoes get rotten then rest can be divided into six bunches having equal number of mangoes. If two mangoes get rotten then rest can be divided into seven bunches having equal number of mangoes. What is the number of mangoes with Ramesh ?

- (a) 285
- (b) 423
- (c) 562
- (d) 345

104. What is mirror image of TIRUCHIRAPPALLI ?

- (a) LLIRPAAARIHCORJIT
- (b) LLJAPPARAIHCORJIT
- (c) LLJAPPARAIHCURIT
- (d) LLJAPPARAIHCORJIT

105. There are 3 Indians and 3 Chinese in a group of 6 people. How many subgroups of this can we choose so that every subgroup has at least one Indian ?

- (a) 56
- (b) 48
- (c) 52
- (d) 44

106. Select the number that can replace the question mark (?) in the following series.

1537, 1539, 1543, ?, 1557, 1567

- (a) 1549
- (b) 1553
- (c) 1550
- (d) 1546

107. The letters from A – Z are numbered 1 to 26 respectively. If $GHI = 1578$ and $DEF = 912$ then what is ABC equal to ?

- (a) 492
- (b) 468
- (c) 262
- (d) 246

108. When a runner was crossing the 12 km mark, she was informed that she had completed only 80% of the race. How many kilometres was the runner supposed to run in this event ?

- (a) 14
- (b) 15
- (c) 16
- (d) 16.5

Directions (Q. 109 to Q. 111) Study the following graph carefully and answer the questions given below :

Distribution of candidates who were enrolled for MBA entrance exam and the candidates (out of those enrolled) who passed the exam in different institutes.

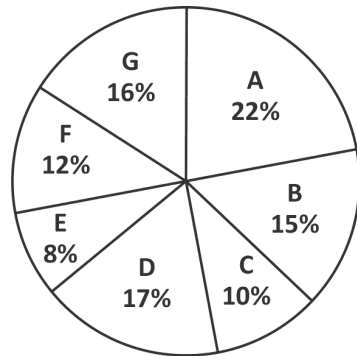


Figure I – Candidates enrolled for exam = 8550

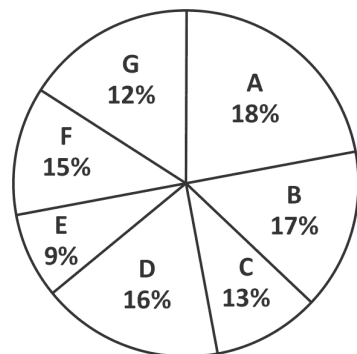


Figure II – Candidates who passed the exam = 5700

109. What percentage of candidates passed the exam from institute E out of the total number of candidates enrolled from the same institute ?

- (a) 80%
- (b) 75%
- (c) 62.5%
- (d) 50%

110. What is the percentage of candidates passed to the candidates enrolled for institutes B and C together ?

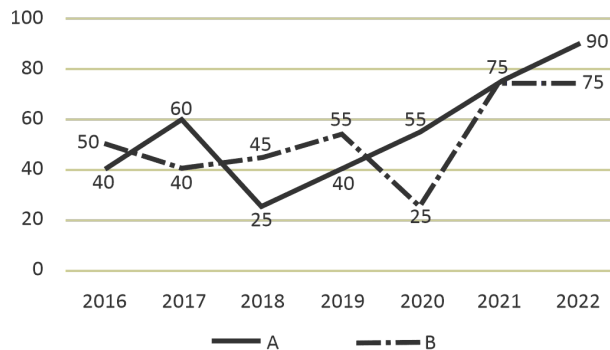
- (a) 65%
- (b) 74%
- (c) 80%
- (d) 68%

111. The number of candidates passed from institutes D and A together exceeds the number of candidates enrolled from institutes E and C together by

- (a) 407
- (b) 399
- (c) 279
- (d) 228

Directions (Q. 112 to Q. 115) : Study the following graph carefully to answer the given questions :

The line graph gives profit percent of companies A and B over different years. Study the following graph carefully and answer the questions given below it.



112. Investment of company 'B' in 2022 is more by 60% than that in the previous year. Income in 2022 was what percent of the investment in 2021 ?

- (a) 280%
- (b) 252%
- (c) 245%
- (d) 52%

113. Average investment of company 'A' over the years was ₹ 26 lakh. What was its average income over the years ?

- (a) ₹ 40.56 lakh
- (b) ₹ 41.60 lakh
- (c) ₹ 50.26 lakh
- (d) Data Inadequate

114. Income of company 'A' in 2020 was ₹ 18.6 lakh. What was the investment ?
- (a) ₹ 11 lakh
 - (b) ₹ 12 lakh
 - (c) ₹ 13 lakh
 - (d) ₹ 14 lakh

115. Income of company 'A' in 2020 is equal to the investment of company B in 2021. What is the ratio of the investment of company 'A' in 2020 to the investment of company 'B' in 2021 ?
- (a) 37 : 36
 - (b) 31 : 28
 - (c) 20 : 31
 - (d) Data Inadequate

Answer Q. 116 to Q. 120 based on the following paragraph :

Five golfers, C, D, E, F and G, play a series of matches in which the following are always true of the results. Either C is last and G is first or C is first and G is last. D finishes ahead of E. Every golfer plays in and finishes every match. There are no ties in any match; that is, no two players ever finish in the same position in a match.

116. If exactly 1 golfer finishes between C and D, which of the following must be true ?
- (a) C finishes first
 - (b) G finishes first
 - (c) F finishes third
 - (d) E finishes fourth

117. Which of the following **cannot** be true ?
- (a) E finishes second
 - (b) F finishes second
 - (c) E finishes ahead of F
 - (d) F finishes ahead of D

118. If D finishes third, which of the following must be true ?
- (a) G finishes first
 - (b) E finishes ahead of F
 - (c) F finishes ahead of E
 - (d) F finishes behind D

119. If C finishes first, in how many different orders is it possible for the other golfers to finish ?
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

120. If a sixth golfer, H, enters a match and finishes ahead of F and behind D, which of the following **cannot** be true ?
- (a) D finishes ahead of G
 - (b) H finishes ahead of E
 - (c) E finishes third
 - (d) H finishes fifth