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OSSC JE

Previous Year Paper
Civil (Prelims)
04 June, 2023

SCRIPT : ENGLISH

D M F 2022

Question Booklet Series Code : **D**   Question Booklet Series No : **09288**

Time Allowed : 150 minutes   Total Questions : 150   Maximum marks : 150

There shall be negative marking @ 0.25 mark per question for wrong / multiple answers.

Before answering any question, check the Booklet that it contains 16 pages and no page is missing, mutilated or repeated. In case of defect, get it replaced immediately.

INSTRUCTIONS FOR CANDIDATES

1. Fill in the OMR answer sheet, mentioning the Roll No. and other data as required. in the place(s) indicated therein, darken the appropriate circles in **blue or black ball point** pen only. Do not write any name / surname or put any symbol, sign, slogan, prayer or any mark or identification in the OMR answer sheet. Do not tamper with the bar-code or any other portion of the OMR answer sheet. **Any such act is liable to render the answer sheet unfit for evaluation**.

2. Correcting fluid, eraser, blade, books, textual material, script notes / loose paper, calculator, document, slide rules, log tables / electronic watches, smart watch, cell phone, pager, other electrical/ electronic devices etc, are not allowed inside the examination hall. In case the candidate is found to be in possession of any of the above, he / she shall be **expelled from the examination without any enquiry** as to whether the same was / were used by the candidate or not.

3. A machine will read the coded information furnished by you in the OMR Answer Sheet. If the information so furnished by you are incomplete or different from what you have given in the application form, **you shall be awarded Zero mark**.

4. Answer must be given by completely darkening one of the four circles / ovals representing the most appropriate answer given on the Answer Sheet corresponding to the relevant question. For Answers not shown by properly darkening **in black / blue ball point pen**, no marks shall be awarded.

5. **No Rough work should be done on the OMR Answer Sheet**, Space for rough work has been provided in the Question Booklet itself.

6. After the examination is over, candidates must ensure to fold the OMR Answer Sheet at the perforation and separate the Original Copy and Candidate's Copy of the Two Part OMR Answer Sheet in the presence of the Invigilator and handover the Original Copy to the Invigilator. The Candidate's Copy of the OMR Answer sheet may be taken by the candidate. **Failure to hand over the original copy of the OMR Answer Sheet to the Invigilator before leaving the examination hall / room shall make the candidate liable for penal action**.

7. Candidates may take with them the respective question-booklet after the examination is over.

8. Failure to comply with or violation of any of the above instructions shall be considered as adopting unfair means and action as deemed proper shall be taken.
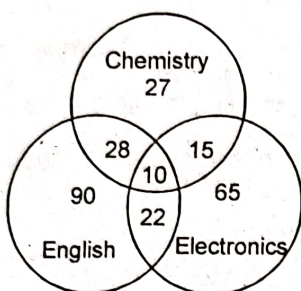
MV – 1D/15

(Turn over)

Logical Reasoning

1. In the Venn diagram below, the number of those candidates is given who passed in Chemistry, Electronics and English. Total number of candidates who appeared for the examination was 600. Find the percentage of candidates who passed in at least two subjects?

   (a) 12.5%
   (b) 1.25%
   (c) 12.05%
   (d) 12%

2. Study the figure given below and find those youth who are in service but not literate:
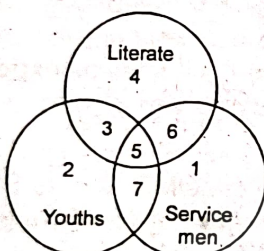
   (a) Only 7
   (b) 3 or 4
   (c) 6 or 4
   (d) 2 or 5 or 7

3. Rajesh goes 10 km towards North, from there he goes 6 km towards South, then he goes 3 km towards East. Find out in which direction and how far is he from the starting point?
   (a) 7 km, West
   (b) 7 km, East
   (c) 5 km, West
   (d) 5 km, North-East
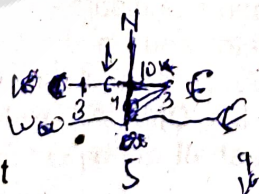
(Q. 4-5) Study the following information carefully and answer the questions:

Point D is 14 meters West of Point A. Point B is 4 meters South of Point D. Point F is 9 meters South of Point D. Point E is 7 meters East of Point B. Point C is 4 meters North of Point E. Point G is 4 meters South of Point A.

4. Which of the following points are in a straight line?
   (a) D, E, A
   (b) E, G, C
   (c) D, B, G
   (d) E, G, B

5. What is the direction of Point A with respect to Point C?
   (a) East
   (b) West
   (c) North
   (d) South

6. In a certain code language '123' means 'bright little boy', '145' means 'take big boy' and '637' means 'beautiful little flower'. Which digit in that language means 'bright'?
   (a) 1
   (b) 2
   (c) 3
   (d) 4

7. A family has a man, his wife, their four sons and their wives. The family of every son also has 3 sons and one daughter. Find out the total number of male members in the whole family.
   (a) 4
   (b) 8
   (c) 12
   (d) 17

8. If 'P + Q' means 'P is the father of Q'; 'P × Q' means 'P is the brother of Q'; 'P − Q' means 'P is the mother of Q', then which of the following is definitely true about C − A + B?
   (a) B is the son of A
   (b) A is the son of C
   (c) B is the father of A
   (d) C is the mother of B

(Q.9-12) Study the following information carefully and answer the questions given below:

All the roads of a city are either perpendicular or parallel to one another. The roads are all straight. Roads A, B, C, D and E are parallel to one another. Roads G, H, I, J, K, L and M are parallel to one another.

(I) Road A is 1 km east of road B.
(II) Road B is ½ km west of road C.

(III)   Road D is 1 km west of road E.
(IV)   Road G is $\frac{1}{2}$ km south of road H.
(V)   Road I is 1 km north of road J.
(VI)   Road K is $\frac{1}{2}$ km north of road L.
(VII)   Road K is 1 km south of road M.

9.   Which is necessarily true ?
     (a)   E and B intersect
     (b)   D is 2 km west of B
     (c)   D is at least 2 km west of A
     (d)   M is 1.5 km north of L

10.   If road E is between B and C, then distance between A and D is :
     (a) $\frac{1}{2}$ km
     (b)   1 km
     (c)   1.5 km
     (d)   1.5 to 2 km

11.   Which of the following possibilities would make the roads coincide ?
     (a)   L is $\frac{1}{2}$ km north of I
     (b)   C is 1 km west of D
     (c)   I is $\frac{1}{2}$ km north of K
     (d)   E and B are $\frac{1}{2}$ km apart

12.   If K is parallel to I and K is $\frac{1}{2}$ km south of J and 1 km north of G, which two roads would be $\frac{1}{2}$ km apart ?
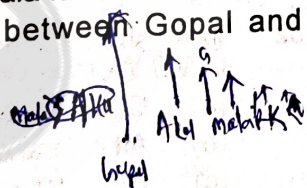   (a)   I and K
     (b)   J and G
     (c)   I and G
     (d)   M and J

(Q.13-14) Read the following information carefully and answer the questions given below it :

Alka is older than Mala. Gopal is older than Mala but younger than Alka. Kapil is younger than Ram and Mala. Mala is older than Ram.
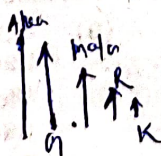
13.   Whose age is between Gopal and Ram ?
     (a)   Mala
     (b)   Kapil
     (c)   Alka
     (d)   None of these

14.   Whose age is between Mala and Kapil ?
     (a)   Gopal
     (b)   Ram
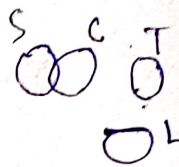   (c)   Alka
     (d)   None of these

(Q. 15-16) Some statements followed by some conclusions are given below in each of the question. You are required to check the validity of each of the conclusion on the basis of the given statements and to mark your answer choice accordingly.
     (a)   If only Conclusion I follows
     (b)   If only Conclusion II follows
     (c)   If either I or II follows
     (d)   If both I and II follow

15.   Statements :
     (I)   Some squares are circles.
     (II)   No circle is a triangle.
     (III)   No line is a square.
   Conclusions :
     (I)   All squares can never be triangles.
     (II)   Some lines are circles.

16.   Statements :
     (I)   All songs are poems.
     (II)   All poems are rhymes.
     (III)   No rhyme is a paragraph.
   Conclusions :
     (I)   No song is a paragraph.
     (II)   No poem is a paragraph.

17.   There is a standard 8 × 8 chess-board. Each of its 64 square is assigned a weight. These weights are assigned in such a manner that the weight of a square is an average of the weight of the square that it is surrounded by. If the weight assigned to the rightmost bottom corner square is 1 kg. Then, what is the heaviest weight assigned among these blocks ?
     (a)   3 kg
     (b)   5 kg
     (c)   8 kg
     (d)   1 kg
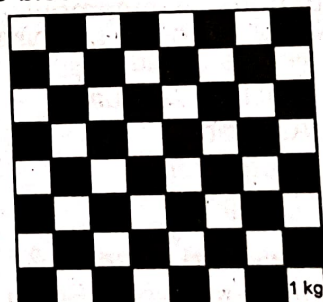
18.   If the positions corresponding to the multiples of 5 in the English alphabet are replaced by symbols and that of multiples of 7 by digits, how many alphabets will be left ?
     (a)   15
     (b)   17
     (c)   18
     (d)   21

19. In the following series of letters, some definite order determines, which of the next two letters in the correct order?
A J K T U B I L S V C H M R W D G N Q X E F O ? ?
   (a) PY
   (b) PZ
   (c) YZ
   (d) ZA

20. Unscramble the letters in the given words and find the odd one out:
   (a) EIWNTR
   (b) UMRSME
   (c) PIGRSN
   (d) LCUOD

21. In the numbers from 100 to 1000, how many times digit 1 comes at the ten's place?
   (a) 9
   (b) 10
   (c) 90
   (d) 900

Computer and Internet Awareness

22. Whenever the data is found in the cache memory it is called as _____.
   (a) HIT
   (b) MISS
   (c) FOUND
   (d) ERROR

23. A program that reads each of the instructions in mnemonic form and translates it into the machine-language equivalent is called:
   (a) Machine language
   (b) Assembler
   (c) Interpreter
   (d) C program

24. What does USB stand for?
   (a) Universal Signal Board
   (b) Universal Signal Bus
   (c) Universal Serial Bus
   (d) Universal Serial Board

25. Convert the binary equivalent 10101 to its decimal equivalent:
   (a) 21
   (b) 12
   (c) 22
   (d) 31

26. A _____ is a diagram that depicts the flow of a program.
   (a) Algorithm
   (b) Hash Table
   (c) Graph
   (d) Flowchart

27. Which of the following shortcut key is used to stop the slide show in PowerPoint?
   (a) Esc key
   (b) Ctrl + O
   (c) Ctrl + N
   (d) Ctrl + K

28. Which of the following is the shortcut key to insert a new slide between the current PowerPoint presentations?
   (a) Ctrl + N
   (b) Ctrl + K
   (c) Ctrl + M
   (d) Ctrl + O

29. You can convert existing Excel worksheet data and charts to an HTML document by using:
   (a) FTP wizard
   (b) Internet assistant wizard
   (c) Intranet wizard
   (d) Import wizard

30. Which of the cell pointer indicates you that you can make selection in Excel?
   (a) Doctor's symbol (Big Plus)
   (b) Small thin plus icon
   (c) Mouse Pointer with anchor at the tip
   (d) None of these

31. What is landscape?
   (a) Page Orientation
   (b) Paper Size
   (c) A Font Style
   (d) Page Layout

32. What shortcut key is used to split a table in MS Word in Windows?
   (a) Ctrl + Shift + Enter
   (b) Alt + Space + Enter
   (c) Ctrl + Alt + Enter
   (d) Alt + Shift + Enter

33. A cookie:
   (a) Stores information about the user's web activity
   (b) Stores software developed by the user
   (c) Stores the password of the user
   (d) Stores the commands used by the user

34. A network that is connected to the Internet, but uses encryption to scramble all the data sent through the internet is called :
    (a) My Network
    (b) Virtual Private Network
    (c) Social Network
    (d) Internet Service Provider

35. You can merge the main document with data source in Excel. In mail merge operation, Word is usually :
    (a) Server
    (b) Source
    (c) Client
    (d) None of these

36. The keys from F1 to F12 are called :
    (a) Toggle keys
    (b) Function keys
    (c) Cursor control keys
    (d) Alphanumeric keys

37. A computer monitor is also called :
    (a) VDU
    (b) VDT
    (c) CRT
    (d) VDO

38. Fastest memory is :
    (a) RAM
    (b) ROM
    (c) Cache memory
    (d) CPU

39. MICR stands for :
    (a) Magnetic Ink Character Register
    (b) Magnetic Ink Code Reader
    (c) Magnetic Ink Character Recognition
    (d) Magnetic Ink Code Register

40. _____ allows you to connect and login to a remote computer.
    (a) Telnet
    (b) FTP
    (c) HTTP
    (d) SMTP

41. The process of locating and fixing an error in a computer program is known as :
    (a) Compiling
    (b) De-Bugging
    (c) Bugging
    (d) Assembling

42. Unsolicited Commercial E-Mail (UCE) is known as :
    (a) Spam
    (b) Malware
    (c) Virus
    (d) Spyware

Current Affairs

43. Annual growth of industry sector at constant prices for 2021-22 (1st RE) was 10.3% for India. What was the rate of growth of industry sector for Odisha in same period ?
    (a) 9.1%
    (b) 10.1%
    (c) 11.1%
    (d) 12.1%

44. Where will the next FIH Men's Hockey World Cup be held ?
    (a) Belgium and Netherlands
    (b) Japan and South Korea
    (c) South Africa
    (d) Argentina

45. Which of the following teams won highest number of medals in Khelo India Games, 2022 hosted by M.P. in Jan-Feb, 2023 ?
    (a) Maharashtra
    (b) Haryana
    (c) M.P.
    (d) Odisha

46. Madhusmita Jena successfully ran Manchester Marathon in April 2023. What clothing did she wear during her Marathon run ?
    (a) Track Suit
    (b) Sambalpuri saree
    (c) Bomkai saree
    (d) Dongaria saree

47. Which among the following is not a "Biodiversity Heritage Site" of Odisha ?
    (a) Gandhmardan Hill
    (b) Deomali Hill
    (c) Mandasaru
    (d) Mahendragiri Hill

48. Who won ICC's Women's T20 World Cup 2023 ?
    (a) India
    (b) Australia
    (c) South Africa
    (d) England

49. Which is the first Greenfield Airport of India ?
   (a) Shivamogga Airport
   (b) Maharaja Agrasen Airport, Hisar
   (c) Chatrapati Sambhajinagar Airport, Aurangabad
   (d) Donyi Polo Airport, Itanagar

50. Which country won highest number of medals at 2022 Winter Olympics ?
   (a) Germany
   (b) Norway
   (c) US
   (d) China

51. Who was elected Speaker of US House of Representatives in January 2023, after record 15th attempt ?
   (a) Nancy Pelosi
   (b) Kevin McCarthy
   (c) Paul Ryan
   (d) John Boehner

52. Which country was admitted to NATO on 4th April, 2023 ?
   (a) Finland
   (b) Sweden
   (c) Norway
   (d) Switzerland

53. Who was the top state of India in NFSA (National Food Security Act) Index 2022 (published by Ministry of Consumer Affairs, Food and Public Distribution, Government of India) ?
   (a) Odisha
   (b) Uttar Pradesh
   (c) Andhra Pradesh
   (d) Gujarat

54. Indian Economy grew at rate of 8.7% in 2021-22. At what rate did Odisha Economy grow during this period ?
   (a) 8.5%
   (b) 9.5%
   (c) 10.5%
   (d) 11.5%

55. 68th National Film Awards were presented on 30 September, 2022. Which film received Swarna Kamal for "Best Feature Film" ?
   (a) Soorarai Pottru
   (b) Marakkar Pottru
   (c) Hellaro
   (d) Kashmir Files

56. Who is the present Chairperson of Odisha Human Right's Commission ?
   (a) Justice Raghubir Das
   (b) Justice Bimal Prasad Das
   (c) Justice B.K Patel
   (d) Justice Shatrughana Pujari

57. Recent (April 2023) armed clashes in Sudan were between which groups ?
   (a) Sudanese Army and Para Military RSF
   (b) Sudanese Army and people demanding restoration of democracy
   (c) Sudanese Army and Army of South Sudan
   (d) None of these

58. 68th National Film Awards were presented on 30 September, 2022. Which film received Swarna Kamal for "Best Children's Film" ?
   (a) Sumi
   (b) Kastoori
   (c) Chillar Party
   (d) I Am Kalam

59. As per recent judgement of Supreme Court of India, (Anoop Barnwal vs Union of India) till a Legislation by Parliament, appointment of EC / CEC will be done by President on advice of a Committee. Who among the following would not be a Member of the said Committee ?
   (a) Prime Minister
   (b) Leader of opposition in Lok Sabha
   (c) Leader of opposition in Rajya Sabha
   (d) Chief Justice of India

60. Which of the following is not a recent Policy initiatives of Odisha Government in the crop sector ?
   (a) Odisha Mushroom Mission
   (b) Odisha Spices Mission
   (c) Odisha Jackfruit Mission
   (d) Odisha Banana Mission

Data Interpretation

(Q. 61-62) Study the following table to answer the questions that follow :

Years / Countries	Production of cars (in thousands)	
	2013	2014
India	700	760
USA	900	940
China	1760	1860
Japan	1500	1580
Italy	1160	1218

61. Find in which country, the production of cars has increased by less than 5% in 2014 over 2013 ?
    (a) USA
    (b) China
    (c) Japan
    (d) Italy

62. What is the ratio between the production of cars by India in 2013 to the production of cars by Japan in 2014 ?
    (a) 35 : 77
    (b) 77 : 37
    (c) 35 : 79
    (d) 79 : 80

63. Find the average number of books sold every year during the period 2010-2013 :

Years	Number of books
2010	1100
2011	1250
2012	1390
2013	1500

    (a) 1210
    (b) 1310
    (c) 1410
    (d) 1411

64. Find the percentage increase in number of books sold in 2013 compared to 2010 :
    (a) 45.45%
    (b) 32.32%
    (c) 36.36%
    (d) 44.44%

65. There are 55 students in a class and the following table shows the number of students and their respective weights :

Number of students	Weights (in kg)
7	62
3	63
15	67
13	70
6	80
9	75
2	95

    Find the average weight of all the 55 students.
    (a) 72.6 kg
    (b) 74.6 kg
    (c) 71.4 kg
    (d) 70.6 kg

MV – 1D/15   (7)

66. The following table shows the marks obtained by two students in different subjects :

Subject	Student A	Maximum Marks	Student B	Maximum Marks
English	60	100	80	150
Psychology	70	100	70	100
History	50	100	60	100
Sanskrit	30	50	15	25

    The difference in aggregate percentage marks of the two students is :
    (a) 2.5%
    (b) 13.75%
    (c) 1.25%
    (d) 0%

67. Consider the following information regarding the performance of a class of thousand students in four different texts :

Marks / Texts	Average Marks	Range of Marks
I	60	30 – 90
II	60	45 – 75
III	70	20 – 100
IV	80	0 – 100

    If a student score 74 marks in each of the four texts, then in which one of the following text his performance is comparatively better ?
    (a) Text I
    (b) Text II
    (c) Text III
    (d) Text IV

(Q. 68-70) In the following table, production of rice of the different states UP, AP and Punjab over the years 2006 -2009 is shown. Study the table carefully and answer the questions given below :

State / Years	2006	2007	2008	2009
UP	5.6	3.7	4.6	7.3
AP	4.7	5.2	8.0	6.5
Punjab	3.8	7.4	5.9	3.1

Production of rice (in tons)

68. What is the difference between the total production of rice (in tons) in all the three states (UP, AP and Punjab) together in 2006 and 2008 respectively ?
    (a) 5.4
    (b) 4.8
    (c) 5.1
    (d) 4.4

(Turn over)

69. What is the average production of rice (in tons) of Punjab state for all the years together ?
    (a) 4.95 tons
    (b) 5.05 tons
    (c) 5 tons
    (d) 4.6 tons

70. What is the percentage increase in the production of rice in the state AP in the year 2009 in comparison with year 2007 ?
    (a) 70%
    (b) 40%
    (c) 55%
    (d) 25%

(Q. 71-75) Refer to the following tables and answer the questions given below :

P

Godowns	Quantity available
1	150
2	220
3	190

Q

Outlets	Capacity as well as Quantity required
A	220
B	140
C	180

Transportation cost per unit (in Rs.) (proportional to distance)

Godowns	Outlets		
	A	B	C
1	8	6	10
2	5	3	7
3	4	9	12

71. If transport at only Godown-2 was available, then at what minimum cost can Godown-2, send all quantity available ?
    (a) Rs. 1,120
    (b) Rs. 820
    (c) Rs. 370
    (d) Rs. 560

72. If only Outlet 'A' is present, then what will be the minimum cost of supply of all quantities from the nearest Godown ?
    (a) Rs. 910
    (b) Rs. 760
    (c) Rs. 640
    (d) Rs. 1,010

73. If only Godown-3 was available, then at what minimum cost can it supply up to the full capacity of its farthest Outlet ?
    (a) Rs. 910
    (b) Rs. 820
    (c) Rs. 2,160
    (d) Rs. 1,120

74. If Godown – 2 is shut down and its availability is divided equally between the Godowns 1 and 3, then which of the two Godowns can exhaust its availability more economically and at what cost ?
    (a) 1, Rs. 1,600
   (b) 1, Rs. 1,800
    (c) 3, Rs. 1,600
    (d) 3, Rs. 1,800

75. Assuming that, the goods shipped is as shown below :

Godowns	(Units Shipped)		
	A	B	C
1	30	40	—
2	25	—	70
3	60	—	30

What will be the total cost incurred ?
    (a) Rs. 1,210
    (b) Rs. 1,695
    (c) Rs. 1,815
    (d) Rs. 965

(Q. 76-80) The bar graph given below shows the percentage distribution of total expenditure of a company under various expense heads during 2013. Study the graph and answer the given questions below :
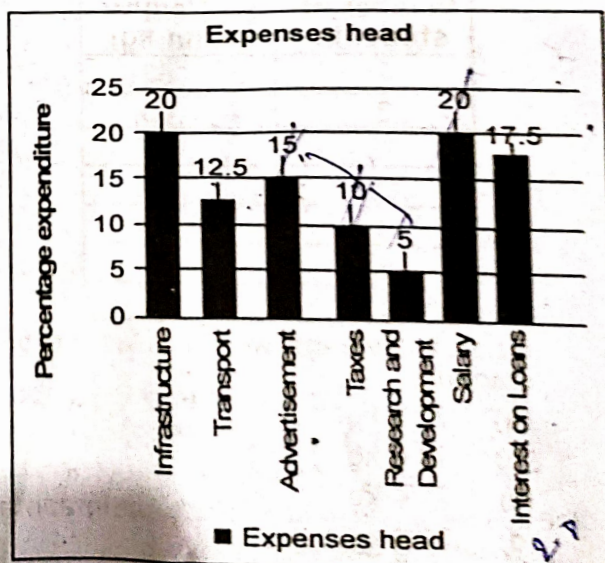
76. What is the percentage difference between the expenditure on Loans and the expenditure on the Interest Transport ?

(a) 5%

(b) 10%

(c) 20%

(d) 40%

77. The ratio of the total expenditure on Infrastructure and Transport to the total expenditure on Taxes and Interest on Loan is :

(a) 5 : 4

(b) 8 : 7

(c) 9 : 7

(d) 13 : 11

78. If the expenditure on Advertisement is Rs. 2.10 crores, then the difference between the expenditures on Transport and Taxes will be :

(a) Rs. 25 lakh

(b) Rs. 35 lakh

(c) Rs. 65 lakh

(d) Rs. 95 lakh

79. If the total amount of expenditure of the company is N times the expenditure on Transport, then the value of N is :

(a) 5

(b) 8

(c) 20

(d) 27

80. If the Interest on Loan amounts to Rs. 2.8 crores, then the total amount of expenditure on Advertisement, Taxes and Research and Development is :

(a) Rs. 2.4 crore

(b) Rs. 4.8 crore

(c) Rs. 5.4 crore

(d) Rs. 7 crore

(Q. 81-85) A watch company produces 4 different products. The sale of these products (in lakhs) during 2005 and 2010 are shown in the following bar graph. Study the graph and answer the questions :

Sales of products of a watch Company In 2005 and 2010
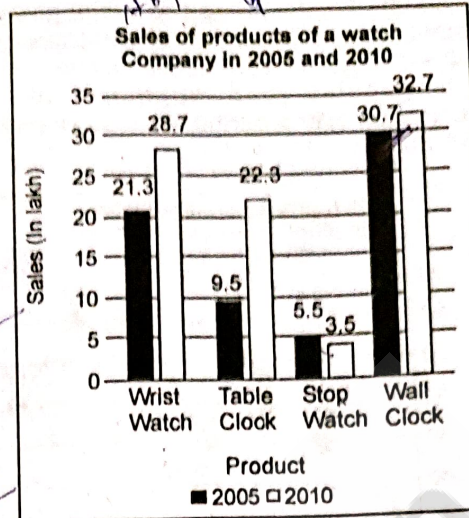
81. By what percentage (approximately) was, the sales of Wrist watch in 2010 more than the sales of Table clock in 2010 ?

(a) 26.7%

(b) 27.7%

(c) 28.7%

(d) 21.7%

82. The ratio of sales of Stop watch in 2010 to the sales of Table clock in 2005 is :

(a) 6 : 19

(b) 7 : 6

(c) 19 : 6

(d) 7 : 19

83. By what percentage (approximately) was, the sales of Table clock in 2005, less than the sales of Wall clock in 2005 ?

(a) 70.05%

(b) 69.05%

(c) 68.05%

(d) 62.05%

84. During the period 2005-2010, the minimum rate of change in sales is in the product of :

(a) Wrist watch

(b) Table clock

(c) Stop watch

(d) Wall clock

85. The sales have increased /decreased by nearly 135% from 2005 to 2010 in :

(a) Table clock

(b) Wrist watch

(c) Stop watch

(d) Wall clock

(Q. 86-90) The following line graph gives the percentage of the number of candidates who qualified in examination out of the total number of candidates who appeared for the examination over a period of seven years from 2008-2014 :

Percentage of Candidates Qualified in an Examination Over the Years
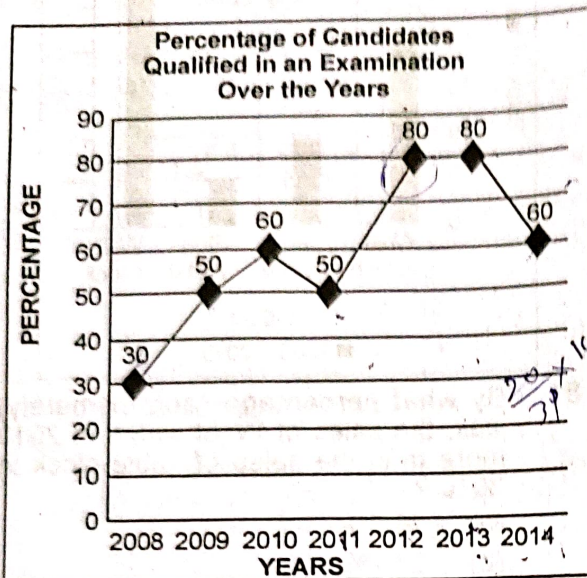
86. The difference between the percentage of candidates qualified, was maximum in which of the following pair of years ?
    (a) 2008 and 2013
    (b) 2011 and 2012
    (c) 2012 and 2013
    (d) 2013 and 2014

87. In which pair of years was the number of candidates qualified the same ?
    (a) 2009 and 2011
    (b) 2009 and 2014
    (c) 2012 and 2013
    (d) Data inadequate

88. If the number of candidates qualified in 2012 was 21200, what was the number of candidates appeared in 2012 ?
    (a) 32000
    (b) 28500
    (c) 26500
    (d) 25000

89. If the total number of candidates appeared in 2010 and 2011 together was 47400, then the total number of candidates qualified in these two years together was :
    (a) 34700

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(b) 32100
(c) 31500
(d) Data inadequate

90. The total number of candidates qualified in 2013 and 2014 together was 33500 and the number of candidates appeared in 2013 was 26500. What was the number of candidates appeared in 2014 ?
    (a) 24500
    (b) 22000
    (c) 20500
    (d) 19000

Arithmetic

91. Sunil covered a certain distance at some speed. Had he moved 3 kmph faster, he would have taken 20 minutes less. If he had moved 2 kmph slower, he would have taken 20 minutes more. The distance (in km) is :
    (a) 20
    (b) $26\frac{2}{3}$
    (c) $15\frac{1}{2}$
    (d) 30

92. A student gets 4 marks for a correct answer and 1 mark is deducted for a wrong answer. If she has attempted 80 questions and she has got 240 marks, the number of questions she did wrong were :
    (a) 21
    (b) 24
    (c) 16
    (d) None of these

93. A Milkman's vessel is filled with liquid, 4 parts of which are water and 5 parts milk. How much of the mixture must be drawn off and replaced with water so that the mixture may be half water and half milk ?
    (a) $\frac{1}{3}$
    (b) $\frac{1}{4}$
    (c) $\frac{1}{5}$
    (d) $\frac{1}{10}$

Contd.

94. $(1296)^{0.16} \times (1296)^{0.09} = ?$
   - (a) 256
   - (b) 316
   - (c) 6
   - (d) 8

95. The value of $\dfrac{978.1375 \times 0.0497 \times 1.956}{0.0866 \times 92.781 \times 99.739}$ is closest to :
   - (a) 0.117
   - (b) 1.17
   - (c) 11.7
   - (d) 117

96. A number when divided by 12 leaves remainder 4. When the square of the number is divided by 16, the remainder is :
   - (a) 0
   - (b) 13
   - (c) 11
   - (d) 4

97. A boat having a length 2.5 m and breadth 2 m is floating on a pond. The boat sinks by 2 cm when Siddharth gets on it. Assuming density of water being 1g/cm^3 the mass of Siddharth is :
   - (a) 80 kg
   - (b) 85 kg
   - (c) 100 kg
   - (d) 93 kg

98. If 100 cats kill 100 mice in 100 days, then 4 cats would kill 4 mice in how many days ?
   - (a) 1 day
   - (b) 4 days
   - (c) 40 days
   - (d) 100 days

99. The captain of a cricket team of 11 members is 29 years old and the vice-captain is 2 years older. If the ages of these two are excluded, the average age of the remaining players is two years less than the average age of the whole team. What is the average age of the team ?
   - (a) 23 years
   - (b) 22 years
   - (c) 24 years
   - (d) None of these

100. At what time between 5 : 30 and 6 will the hands of a clock be at right angles ?
   - (a) $43\frac{7}{11}$ minutes past 5
   - (b) $43\frac{5}{11}$ minutes past 5
   - (c) 40 minutes past 5
   - (d) 41 minutes past 5

101. On what dates of April, 2001 did Wednesday fall ?
   - (a) 1st, 8th, 15th, 22nd, 29th
   - (b) 2nd, 9th, 16th, 23rd, 30th
   - (c) 3rd, 10th, 17th, 24th
   - (d) 4th, 11th, 18th, 25th

102. Ajit, Sumit and Rashmi are three partners and they shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments ?
   - (a) 5 : 7 : 8
   - (b) 20 : 49 : 64
   - (c) 38 : 28 : 21
   - (d) None of these

103. A shopkeeper bought candies at 5 for a rupee. How many for a rupee must he sell to gain 25% ?
   - (a) 3
   - (b) 4
   - (c) 5
   - (d) 6

104. The difference between compound interest and simple interest on an amount of Rs. 10,000 for 2 years is Rs. 144. What is the rate of interest per annum ?
   - (a) 8
   - (b) 10
   - (c) 12
   - (d) Cannot be determined

105. A Cistern is filled in 6 hours by three pipes A, B and C. The pipe C is thrice as fast as B and B is twice as fast as A. How much time will pipe B alone take to fill the tank ?
   - (a) 20 hours
   - (b) 54 hours
   - (c) 27 hours
   - (d) Cannot be determined

(Turn over)

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106. Total number of factors of 540 are :
    (a) 24
    (b) 27
    (c) 32
    (d) None of these

107. Two numbers A and B are such that the sum of 5% of A and 4% of B is two-third of the sum of 6% of A and 8% of B. Find the ratio A : B.
    (a) 2 : 3
    (b) 1 : 1
    (c) 3 : 4
    (d) 4 : 3

108. The salaries of Ritu, Nitu and Situ are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries ?
    (a) 3 : 3 : 10
    (b) 10 : 11 : 20
    (c) 23 : 33 : 60
    (d) Cannot be determined

109. Samrat is as much younger than Ritesh as he is older than Tamanna. If the sum of the ages of Ritesh and Tamanna is 50 years, what is definitely the difference between Ritesh and Samrat's age ?
    (a) 1 year
    (b) 2 years
    (c) 25 years
    (d) Data inadequate

110. Three numbers are in the ratio of 2 : 3 : 7 and their L.C.M. is 8400. Their H. C. F. is :
    (a) 40
    (b) 80
    (c) 120
    (d) 200

111. Seema, counted in the following way on the fingers of her left hand :

    She started by calling the thumb 1, the index finger 2, middle finger 3, ring finger 4, and little finger 5 and then reversed direction calling the ring finger 6, middle finger 7, index finger 8, thumb finger 9. Then again reversed direction calling index finger 10 and so on. She counted up to 1994. She ended counting on which finger ?
    (a) Thumb

    (b) Index finger
    (c) Middle finger
    (d) Ring finger

112. Alok and Bipul take part in 200 m race. Alok runs at 8 kmph. Alok gives Bipul a start of 8 m and still beats him by 18 seconds. The speed of Bipul is :
    (a) 8.15 kmph
    (b) 5.14 kmph
    (c) 4.25 kmph
    (d) 6.4 kmph

113. A boat takes 90 minutes less to travel 36 miles downstream than to travel the same distance upstream. If the speed of the boat in still water is 10 mph, the speed of the stream is :
    (a) 2 mph
    (b) 2.5 mph
    (c) 3 mph
    (d) 4 mph

114. Two trains of equal lengths take 10 seconds and 15 seconds respectively to cross a telegraph post. If the length of each train be 150 metres, in what time (in seconds) will they cross each other travelling in opposite direction ?
    (a) 10
    (b) 12
    (c) 15
    (d) 20

115. 4 men and 6 women can complete a work in 8 days, while 3 men and 7 women can complete it in 10 days. In how many days will 10 women complete it ?
    (a) 35
    (b) 40
    (c) 45
    (d) 50

116. There are three numbers A, B and C. The Highest Common Factor of A and B, B and C, C and A are 3, 15 and 3 respectively. If Least Common Multiple of the three numbers is 300 and their product is 13500, then find the greatest possible number, which can divide them.
    (a) 25
    (b) 3
    (c) 12
    (d) None of these

117. What is the least possible number, which when divided by 18, 35 or 42, it leaves 2, 19, and 26 as the remainders respectively ?
    (a) 1244
    (b) 614
    (c) 1874
    (d) None of these

118. The number of zeros at the end of the expression
    10 × 100 × 1000 × 10000.........× 10000000000 is :
    (a) 10
    (b) 100
    (c) 50
    (d) 55

119. Find the 11th term from the last term (towards the first term) of the AP : 10, 7, 4, . . ., – 62.
    (a) – 32
    (b) – 35
    (c) – 29
    (d) 32

120. 10 years ago, the average age of all the 25 teachers of a school was 45 years. 4 years ago, the Principal has retired from her post at the age of 60 years. So, after one year, a new Principal, whose age was 54 years, recruited from outside. If Principal is also counted as a teacher, then the present average age of all the teachers is :
    (a) $54\frac{18}{25}$ years
    (b) $55\frac{19}{25}$ years
    (c) $53\frac{8}{25}$ years
    (d) None of these

121. The 30 members of a club decided to play a badminton singles tournament. Every time a member loses a game, he is out of the tournament. There are no ties. What is the minimum number of matches that must be played to determine the winner ?
    (a) 15
    (b) 29
    (c) 61
    (d) None of these

122. If the price of petrol falls down by 20%, by how much percent, must a person increase its consumption, so as to maintain the expenditure on petrol same as previous ?
    (a) 20%
    (b) 25%
    (c) 33.33%
    (d) 80%

123. If the cost price of 15 apples is same as the selling price of 20 apples, what is the gain or loss percent ?
    (a) 25% gain
    (b) 25% loss
    (c) 33.33% gain
    (d) 33.33% loss

124. Jadeja purchased a car 3 years ago for Rs 2 Lakhs. Its value depreciated each year by 25% per annum. What is the present value of the car ?
    (a) 85260
    (b) 84050
    (c) 84375
    (d) 82540

125. 16 workers working 6 hours a day, can build a wall of length 150 m, breadth 20 m and height 12 m. in 25 days. In how many days 12 workers, working 8 hours a day, can build a wall of length 800 m, breadth 15 m, height 6 m ?
    (a) 60
    (b) 50
    (c) 40
    (d) None of these

126. A and B started simultaneously towards each other, from P and Q respectively. The distance between P and Q is 600 km and the ratio of speeds of A and B is 5 : 7. If they meet at a point M, then the distance PM is :
    (a) 350 km
    (b) 150 km
    (c) 250 km
    (d) None of these

127. Savita and Hamida are friends. What is the probability that both will have different birthdays ? (Ignoring a leap year).
    (a) $\frac{365}{366}$
    (b) $\frac{364}{365}$
    (c) $\frac{363}{365}$
    (d) $\frac{363}{366}$

128. What is the product of all the numbers in the dial of a telephone ?
    (a) 1,58,480
    (b) 1,59,450
    (c) 0
    (d) None of these

129. What is the unit digit in $\{(6374)^{1793} \times (625)^{317} \times (341)^{491}\}$?
    (a) 0
    (b) 2
    (c) 3
    (d) 5

130. On dividing 2272 as well as 875 by 3-digit number N, we get the same remainder. The sum of the digits of N is :
    (a) 10
   (b) 11
    (c) 12
    (d) 13

131. A boy multiplied 987 by a certain number and obtained 559981 as his answer. If in the answer both 9 are wrong and the other digits are correct, then the correct answer would be :
    (a) 553681
    (b) 555181
    (c) 555681
    (d) 556581

132. A number consists of 3 digits whose sum is 10. The middle digit is equal to the sum of the other two and the number will be increased by 99 if its digits are reversed. The number is :
    (a) 145
    (b) 253
    (c) 370
    (d) 352

133. Count the number of triangles in given figure :
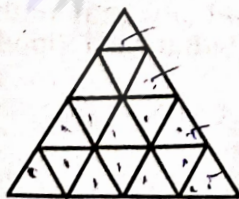
    (a) 24
    (b) 26
    (c) 27
    (d) 28

134. A man wears socks of two colours - black and brown. He has altogether 20 black socks and 20 brown socks in a drawer. Supposing he has to take out the socks in the dark, how many least number of socks must he take out to be sure that he has matching pair ?
    (a) 3
    (b) 20
    (c) 39
    (d) None of these

135. Which of the following statements are true ?
    (i)   Every whole number is a natural number.
    (ii) Every integer is a rational number.
    (iii) Every rational number is an integer.
    (a) (ii) only
    (b) (i) and (ii) only
    (c) (iii) only
    (d) All are true statements

Logical Reasoning

136. If in a code language 'MATCH' is written as 'NCWGM' and 'BOX' as 'CQA' , then how will 'NOTEBOOK' be written in the same language ?
    (a) OQWGIUVS
    (b) OQWIGVUS
    (c) OQWIGUVS
    (d) OQWIGUSV

137. If in a code language, "LUXOR" is written as 30, then in the same language, "GUILDS" will be written as :
    (a) 36
    (b) 38
    (c) 24
    (d) 40

138. In the given set, a rule is followed, find the set based on the same rule from the given options :
    Given set – (15, 30, 90)
    (a) (6, 18, 54)
    (b) (12, 24, 36)
    (c) (12, 24, 72)
    (d) (12, 26, 70)

139. 'Writing' is related to 'Pen' as :
    (a) 'Singing' is related to 'Music'
    (b) 'Stitching' is related to 'Needle'
    (c) 'Dance' is related to 'Exercise'
    (d) 'Carpenter' is related to 'Tools'

140. Find the pair which is different from the other three pairs.
    (a) BFE
    (b) HLK
    (c) DHG
    (d) JNR

141. A monkey jumps up 30 feet at the beginning of each hour and rests for an hour, when he slips back 20 feet before he again starts climbing in the beginning of the next hour. If he begins his ascent at 8:00 am, at what time will he first touch a flag at 120 feet from the ground ?
    (a) 4 p.m.
    (b) 5 p.m.
    (c) 6 p.m.
    (d) None of these

142. If a clock rings once at 1 O'clock, twice at 2 O'clock, thrice at 3 O'clock and so on, then how many times the clock will ring in one day ?
    (a) 144 times
    (b) 136 times
    (c) 156 times
    (d) 147 times

143. If the water reflection of a Clock above, shows time as 6 hours 10 minutes, then the actual time will be :
    (a) 6 : 50
    (b) 12 : 40
    (c) 12 : 20
    (d) 6 : 10

144. Four bags T, S, V and W are so, that they all are of different weights. Bag T is only lighter than S. V is lighter than W. and W is lighter than T. Which is the lightest bag ?
    (a) S
    (b) W
    (c) T
    (d) V.

145. It being given that : > denotes +, < denotes −, + denotes ÷, − denotes =, =

denotes < and x denotes > : find which of the following Is a correct statement ?
    (a) 3 + 2 > 4 = 9 + 3 < 2
    (b) 3 > 2 > 4 = 18 + 3 < 1
    (c) 3 > 2 < 4 x 8 + 4 < 2
    (d) 3 + 2 < 4 x 9 + 3 < 3

146. In the following number series, only one term is different. Find the different term :
    8, 27, 64, 100, 125, 216, 343
    (a) 27
    (b) 100
    (c) 125
    (d) 343

147. In 318, 368, 345, 395, 372, 422, ?, 449, what will come in place of question mark (?) ?
    (a) 398
    (b) 395
    (c) 438
    (d) 399

148. In the following series of Letters, which of the following options will come in place of question mark (?)
    BXF   DVI   FTL   HRO   ?
    (a) JOL
    (b) KPM
    (c) KPL
    (d) JPR

149. Find the missing character from among the given alternatives :

?	20160	4	
480		4	
	96	24	8

    (a) 860
    (b) 1140
    (c) 2880
    (d) 3240

150. Assuming in the year 1950, Republic Day was celebrated on Wednesday. In the year 1951, this day would be celebrated on :
    (a) Monday
    (b) Tuesday
    (c) Friday
    (d) Thursday

Provisional Answer-key for CTSRE Preliminary Examination-2022 held on 04-06-2023

A	B	C	D	Correct Alternative	A	B	C	D	Correct Alternative	A	B	C	D	Correct Alternative
1	121	91	61	a	51	21	141	111	b	101	71	41	11	c
2	122	92	62	c	52	22	142	112	d	102	72	42	12	d
3	123	93	63	b	53	23	143	113	a	103	73	43	13	a
4	124	94	64	c	54	24	144	114	b	104	74	44	14	b
5	125	95	65	d	55	25	145	115	b	105	75	45	15	a
6	126	96	66	d	56	26	146	116	b	106	76	46	16	d
7	127	97	67	b	57	27	147	117	b	107	77	47	17	d
8	128	98	68	d	58	28	148	118	d	108	78	48	18	c
9	129	99	69	b	59	29	149	119	a	109	79	49	19	a
10	130	100	70	d	60	30	150	120	a	110	80	50	20	d
11	131	101	71	b	61	31	1	121	b	111	81	51	21	c
12	132	102	72	b	62	32	2	122	b	112	82	52	22	a
13	133	103	73	c	63	33	3	123	b	113	83	53	23	a
14	134	104	74	c	64	34	4	124	c	114	84	54	24	c
15	135	105	75	b	65	35	5	125	b	115	85	55	25	a
16	136	106	76	d	66	36	6	126	c	116	86	56	26	d
17	137	107	77	d	67	37	7	127	b	117	87	57	27	c
18	138	108	78	b	68	38	8	128	c	118	88	58	28	c
19	139	109	79	b	69	39	9	129	a	119	89	59	29	b
20	140	110	80	b	70	40	10	130	a	120	90	60	30	a
21	141	111	81	c	71	41	11	131	c	121	91	61	31	a
22	142	112	82	d	72	42	12	132	b	122	92	62	32	a
23	143	113	83	b	73	43	13	133	c	123	93	63	33	a
24	144	114	84	d	74	44	14	134	a	124	94	64	34	b
25	145	115	85	a	75	45	15	135	a	125	95	65	35	b
26	146	116	86	a	76	46	16	136	c	126	96	66	36	b
27	147	117	87	d	77	47	17	137	c	127	97	67	37	a
28	148	118	88	c	78	48	18	138	c	128	98	68	38	c
29	149	119	89	d	79	49	19	139	b	129	99	69	39	c
30	150	120	90	c	80	50	20	140	d	130	100	70	40	a
31	1	121	91	a	81	51	21	141	b	131	101	71	41	b
32	2	122	92	c	82	52	22	142	c	132	102	72	42	a
33	3	123	93	d	83	53	23	143	c	133	103	73	43	d
34	4	124	94	c	84	54	24	144	d	134	104	74	44	a
35	5	125	95	a	85	55	25	145	c	135	105	75	45	a
36	6	126	96	a	86	56	26	146	b	136	106	76	46	b
37	7	127	97	c	87	57	27	147	d	137	107	77	47	b
38	8	128	98	d	88	58	28	148	d	138	108	78	48	b
39	9	129	99	d	89	59	29	149	c	139	109	79	49	d
40	10	130	100	a	90	60	30	150	d	140	110	80	50	b
41	11	131	101	d	91	61	31	1	a	141	111	81	51	b
42	12	132	102	b	92	62	32	2	a	142	112	82	52	a
43	13	133	103	b	93	63	33	3	d	143	113	83	53	a
44	14	134	104	c	94	64	34	4	d	144	114	84	54	d
45	15	135	105	c	95	65	35	5	a	145	115	85	55	a
46	16	136	106	a	96	66	36	6	b	146	116	86	56	d
47	17	137	107	d	97	67	37	7	d	147	117	87	57	a
48	18	138	108	c	98	68	38	8	b	148	118	88	58	a
49	19	139	109	d	99	69	39	9	d	149	119	89	59	c
50	20	140	110	d	100	70	40	10	d	150	120	90	60	d