

"Your commitment paired with our coaching is a path of your success"

Join Us Now

And Start Your Success Journey

01141676717

info@scholarssacademy.in

www.scholarssacademy.in



Rajnish Bhatnagar

Railway NTPC Pre

Read the following instructions carefully before you begin to attempt the questions.

INSTRUCTIONS TO CANDIDATE

- (1) This booklet contains **100 Questions**.
CBT I (Mathematics, Mental Ability, General Science & General Awareness) (100 Questions)
- (2) All the questions are compulsory and carry equal marks.
- (3) Before you start to attempt the questions, you must explore this booklet and ensure that it contains all the pages and find that no page is missing or replaced. If you find any flaw in this booklet, you must get it replaced immediately.
- (4) **Each question carries negative marking also as 1/3 mark will be deducted for each wrong answer. /**
- (5) Answer must be shown by completely blackening the corresponding circles on the Answer-Sheet against the relevant question number by **Black/Blue ball pen** only.
- (6) Failure to comply with any of the above Instructions will make a candidate liable to such action/penalty as may be deemed fit.
- (7) Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any question.
- (8) Mobile phones and wireless communication device are completely banned in the examination halls/rooms. Candidates are advised not to keep mobile phones/any other wireless communication devices with them even switching it off, in their own interest. Failing to comply with this provision will be considered as using unfair means in the examination and action will be taken against them including cancellation of their candidature.
- (9) No rough work is to be done on the Answer-Sheet.
- (10) No candidate can leave the examination hall before completion of the exam.

NAME OF CANDIDATE:.....

DATE :..... **CENTRE CODE :**.....

ROLL No

Maximum Marks : **100**

Total Questions : **100**

Time Allowed : **90 Min.**

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

QYZ-911024494-E

CBT I (Mathematics, Mental Ability, General Science & General Awareness)

1. The disease AIDS is caused by _____.
(A) Bacteria (B) Fungi
(C) Virus (D) Protozoan
2. If $\frac{6x-1}{x} + \frac{7y-1}{y} + \frac{8z-1}{z} = 0$, then what is the value of $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$?
(A) 1 (B) 3
(C) 0 (D) 21
3. If $N = \frac{\sqrt{7}-\sqrt{3}}{\sqrt{7}+\sqrt{3}}$, then what is the value of $N + \frac{1}{N}$?
(A) $2\sqrt{2}$ (B) 5
(C) 10 (D) 13
4. Which state has the smallest land area?
(A) Goa (B) Nagaland
(C) Sikkim (D) Tripura
5. An alloy is _____.
(A) a compound (B) an allotropic form
(C) an isomer (D) a mixture
6. In which Indian state did the game of Polo originate?
(A) Meghalaya (B) Rajasthan
(C) Manipur (D) West Bengal
7. Which blood group is a universal recipient?
(A) A (B) B
(C) AB (D) O
8. The term 'mixed economy' denotes _____.
(A) existence of both rural and urban sectors
(B) existence of both private and public sectors
(C) existence of both heavy and small industries
(D) existence of both developed and underdeveloped sectors
9. In which year did the Parliament adopt Indian Constitution?
(A) 1947 (B) 1949
(C) 1950 (D) 1952
10. Neutron was discovered by _____.
(A) J. J. Thomson (B) Chadwick
(C) Rutherford (D) Priestley
11. What is the value of $\left(\frac{1}{\operatorname{cosec} \theta + \cot \theta}\right)^2$?
(A) $\operatorname{cosec} \theta + \tan \theta$ (B) $\sin \theta + \cos \theta$
(C) $\frac{1-\cos \theta}{1+\cos \theta}$ (D) $\frac{1-\sin \theta}{1+\sin \theta}$
12. The earliest city discovered in India was _____.
(A) Harappa (B) Rangpur
(C) Mohenjodaro (D) Sindh
13. Which Amendment Act introduced changes in the Preamble to the Indian Constitution?
(A) The 38th Amendment Act, 1975
(B) The 40th Amendment Act, 1976
(C) The 42nd Amendment Act, 1976
(D) The 44th Amendment Act, 1979
14. pH value of alkaline solution is _____.
(A) <7 (B) 7
(C) >7 (D) None of these
15. By interchanging which two signs the given equation will be correct?
 $43 + 9 - 6 \div 3 \times 8 = 50$
(A) $\div$ and $\times$ (B) $+$ and $\div$
(C) $-$ and $+$ (D) $-$ and $\times$
16. Which among the following tributaries of Indus originates from Lake Mansarovar?
(A) Jhelum (B) Sutlej
(C) Beas (D) Ravi
17. What is the Least Common Multiple of 8, 15, 24 and 72?
(A) 350 (B) 360
(C) 720 (D) 735
18. Smallest bone of human body is _____.
(A) Nails (B) Fibula
(C) Bone of nose (D) Stapes
19. Upanishad are books on _____.
(A) Religion (B) Yoga
(C) Law (D) Philosophy
20. The articles of the Constitution of India which deal with Directive Principles of State Policy are _____.
(A) 26 to 41 (B) 30 to 45
(C) 36 to 51 (D) 40 to 55
21. A shopkeeper sells his goods at 15% discount. What is the marked price of an article when selling price is ₹ 629?
(A) ₹ 740 (B) ₹ 704
(C) ₹ 700 (D) ₹ 614
22. Where did Lord Buddha breathe his last (Mahaparinirvan)?
(A) Rajgir (B) Bodh Gaya
(C) Sarnath (D) Kushinagar
23. In a certain code language, 'SURGEON' is written as 'QLHDURV' and 'CORNER' is written as 'OHKULF'. What is the code for 'SHADOW' in that code language?
(A) DRTERS (B) TRADEV
(C) UQBCFU (D) TFBCPX
24. Which of the following planets rotates clock wise?
(A) Pluto (B) Jupiter
(C) Venus (D) Mercury

25. Which set of symbols will fit in the given equation?
 $14 \ ? \ 2 \ ? \ 4 \ ? \ 6 \ ? \ 4$
 (A) $\times, \div, >$ and $\times$ (B) $\div, \times, >$ and $\times$
 (C) $\div, +, =$ and $\times$ (D) $\div, +, >$ and $\times$
26. What is the value of $0.82\overline{68}$?
 (A) $\frac{3093}{4950}$ (B) $\frac{3043}{4850}$
 (C) $\frac{4093}{4950}$ (D) $\frac{3039}{4950}$
27. Sunita walks 45 metres towards south. Then turns right and walk another 45 metres. Then turn right and walks for 20 metres to reach point L. She then again turns to her right and walks for 45 metres. How far (in metres) is she from point L?
 (A) 50 (B) 45
 (C) 25 (D) 60
28. Who among the following Rajput king defeated Muhammad Ghori for the first time?
 (A) Prithviraj III (B) BaghelBhim
 (C) Jaichanda (D) Kumarpal
29. The population of a town is 8000. It increases by 10% during the first year and by 20% during the second year. What will be the population after 2 years?
 (A) 11560 (B) 10500
 (C) 10560 (D) 11500
30. Who invented vaccination?
 (A) Alexander Fleming (B) Edward Jenner
 (C) Jonas Salk (D) Louis Pasteur
31. Who built the Ibadatkhana at Fatehpur Sikri?
 (A) Akbar (B) Jahangir
 (C) Sahjahan (D) Aurangzeb
32. A sum becomes its double in 10 years. What is the annual rate of simple interest?
 (A) 20% (B) 10%
 (C) 5% (D) 1%
33. The apex institution in the sphere of Agriculture credit is _____.
 (A) State Bank of India (B) Reserve Bank of India
 (C) Regional Rural Bank (D) NABARD
34. Which part of the computer is used for calculating and comparing?
 (A) Disk Unit (B) Control Unit
 (C) Modem (D) ALU
35. A man sells his typewriter at 5% loss. If he sells it for ₹ 80 more, he gain 5%. What is the cost price of typewriter?
 (A) ₹ 1600 (B) ₹ 1200
 (C) ₹ 1000 (D) ₹ 800
36. In the following question, based on the given statement which of the following assumption(s) is/are implicit.
Statements: "One day taken strike was called by the employees in government organization to protest

against privatization of profit making public sector undertakings."

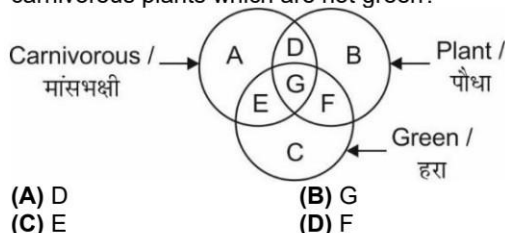
Assumptions: I. The Government may favourably consider the views of the employees.

II. Strike is the most popular tool used by people to protect.

- (A) If only I is implicit
 (B) If only II is implicit
 (C) Both I and II are implicit
 (D) None of these

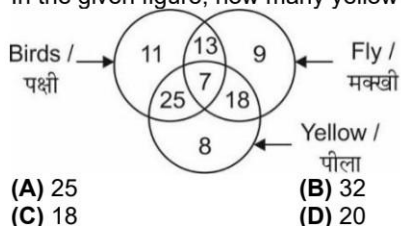
37. Which one of the following fuels causes minimum environmental pollution?
 (A) Diesel (B) Coal
 (C) Hydrogen (D) Kerosene
38. 12 men can do a piece of work in 24 days. How many days are needed to complete the work if 8 men do this work?
 (A) 28 (B) 36
 (C) 48 (D) 52
39. The sum of three numbers is 315. If the ratio between 1st and 2nd is 2 : 3 and the ratio between 2nd and 3rd is 4 : 5, then what is the 2nd number?
 (A) 118 (B) 120
 (C) 108 (D) 100
40. Among the following, which one is not a football club?
 (A) Arsenal (B) Aston Villa
 (C) Chelsea (D) Monte Carlo

41. In the given figure, which letter represents carnivorous plants which are not green?



Direction 42 to 44: Select the related word/letter/number from the given alternatives.

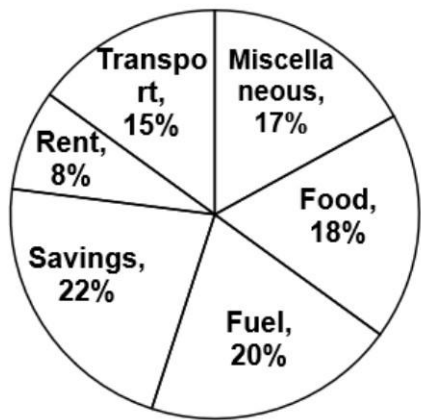
42. Steel : Alloy :: Zinc : ?
 (A) Metal (B) Non-metal
 (C) Aluminium (D) Copper
43. QIOK : MMKO :: YAWC : ?
 (A) USGA (B) UESG
 (C) VUES (D) SUEG
44. $0.01 : 0.0001 :: 0.05 : ?$
 (A) 0.00025 (B) 0.0025
 (C) 0.025 (D) 0.25
45. In the given figure, how many yellow birds are there?



46. With the rise of temperature, the surface tension of a liquid _____.
(A) Increases (B) Decreases
(C) Remains unchanged (D) None of these

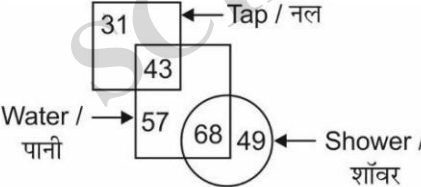
Direction 47 to 49: Study the following pie chart carefully and answer the question based on it.

The following pie chart shows the expenditure (in percentage) of Mahesh. The monthly income of Mahesh is ₹ 26000.



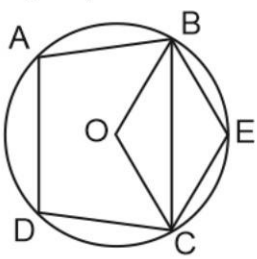
47. How much does he spend (in ₹) on rent?
(A) 2080 (B) 2275
(C) 2470 (D) 2840
48. How much more does his saving and spend (in ₹) on the Fuel taken together than Transport?
(A) 5850 (B) 6060
(C) 7020 (D) 8420
49. Had his income been ₹ 22,000, how much less he would have spent on Miscellaneous (in ₹)?
(A) 510 (B) 680
(C) 765 (D) 935

50. In the given figure, how many water are either tap or shower?



- (A) 168 (B) 111
(C) 125 (D) 108
51. In the following question, based on the given statement which of the following assumption(s) is/are implicit.
Statements: Anger is energy, in a more proactive way and how to channelize it is in itself a skill.
Assumptions: I. Anger need to be channelized.
II. Only skillful people can channelize anger to energy.
(A) If only I is implicit
(B) If only II is implicit
(C) Both I and II are implicit
(D) Either I or II is implicit

52. In the given figure, O is the center of the circle, $\angle DAB = 110^\circ$ and $\angle BEC = 100^\circ$. What is the value (in degrees) of $\angle OCB$?



- (A) 5 (B) 10
(C) 15 (D) 20
53. ₹ 7500 is borrowed at CI at the rate of 4% per annum. What will be the amount to be paid after 1 year, if interest is compounded half-yearly?
(A) ₹ 7800 (B) ₹ 7803
(C) ₹ 7783 (D) ₹ 7628
54. The vitamin that is most readily manufactured in the bodies is _____.
(A) Vitamin A (B) Vitamin B
(C) Vitamin C (D) Vitamin D
55. A man takes twice as long to row up as to row down the river. If the speed of river water is 4 km/hr, then what is the speed of the man's boating in still water?
(A) 12 km/hr (B) 10 km/hr
(C) 15 km/hr (D) 18 km/hr
56. What number has to be added to each term of 3 : 5 to make the ratio 5 : 6?
(A) 6 (B) 7
(C) 5 (D) 8
57. Which of the following metals corrodes in moist air?
(A) Au (B) Ag
(C) Ni (D) Fe
58. In the following question, based on the given statement which of the following cause of action(s) is/are strong.
Statements: Cause of road accidents are increasing constantly, particular in urban areas.
Cause of action: I. Transport authorities in the urban areas should impose strictly control rules for maintenance of vehicles.
II. Traffic police should punish those found to be violating traffic rules.
(A) If only I is strong
(B) If only II is strong
(C) Both I and II are strong
(D) Neither I nor II is strong
59. In a certain code language, 'DRAFT' is written as '93210', 'BEFORE' is written as '796873' and 'BUFFET' is written as '984709'. What is the code for 'F' in that code language?
(A) 9 (B) 3
(C) 6 (D) 1

60. What should come in place of question mark (?) in the following question?

$$\frac{1}{7} \times \sqrt{1764} = 112 - ?$$

- (A) 106 (B) 100
(C) 75 (D) 92

61. In the following question, based on the given statement which of the following conclusion(s) is/are follow.

Statements: A neuroticism is a non-stupid person who behaves stupidly.

Conclusions: I. Neurotic and stupidity go hand in hand.

II. Normal persons behave intelligently.

- (A) If only I follows
(B) If only II follows
(C) Both I and II are follow
(D) Neither I nor II follows

62. If $\sin(\theta + 23^\circ) = \cos 58^\circ$, then what is the value of $\cos 58^\circ$?

- (A) $\frac{1}{2}$ (B) $\frac{1}{\sqrt{2}}$
(C) $\frac{\sqrt{3}}{2}$ (D) 0

63. A train crosses a platform in 30 seconds travelling with a speed of 90 km/hr. If the length of the train is 250 metres, then what will be the length (in metres) of the platform?

- (A) 450 (B) 500
(C) 360 (D) 600

64. Which Sikh Guru assumed the title 'Sachcha Badshah'?

- (A) Guru Nanak (B) Guru Teg Bahadur
(C) Guru Har govind (D) Guru Gobind Singh

65. The ratio of curved surface area of two cones is 1 : 4 and the ratio of slant height of the two cones is 2 : 1. What is the ratio of the radius of the two cones?

- (A) 1 : 2 (B) 1 : 4
(C) 1 : 8 (D) 1 : 1

66. In the following question, based on the given statement which of the following conclusion(s) is/are follow.

Statements: I. All women are hardworking.

II. All intelligent are advocate.

III. Some intelligent are women.

Conclusions: I. Some advocates are women.

II. Some hardworking are women.

III. Some women are advocate.

IV. Some hardworking are intelligent.

- (A) Only conclusion (II), (III) and (IV) follow
(B) Only conclusion (I), (II) and (III) follow /
(C) Only conclusion (I), (III) and (IV) follow /
(D) All conclusions follow

67. In a certain code language, 'CLICK' is written as 'FOLFN'. What is the code for 'PAID' in that code language?

- (A) SLGO (B) SLKG
(C) SLDG (D) SDLG

68. Largest ecosystem of world is _____.

- (A) Grass land (B) Lake
(C) Sea (D) Forest

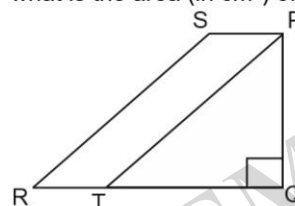
69. 1 man or 2 women or 3 boys can do a work in 44 days. Then in how many days will 1 man, 1 woman and 1 boy do the work?

- (A) 18 (B) 12
(C) 20 (D) 24

70. Which of the following comprise commonly used Assembly language?

- (A) ARM (B) COBOL
(C) BASIC (D) Python

71. In the given figure, area of isosceles triangle PQT is 128 cm^2 and $QT = PQ$ and $PQ = 4 \text{ PS}$, $PT \parallel SR$, then what is the area (in cm^2) of trapezium PTRS?



- (A) 80 (B) 64
(C) 124 (D) 72

72. The average weight of 6 persons is increased by 3 kg when a person of 100 kg comes out of the group and another person takes his place. What is the weight of new person?

- (A) 125 kg (B) 145 kg
(C) 118 kg (D) 120 kg

73. Pointing to a boy, Sita says, "He is the only son of my father-in-law only son". How Sita is related to that boy?

- (A) Wife (B) Mother
(C) Sister (D) Grand mother

74. A dealer sold a radio at a profit of 20%. Had he sold it for ₹ 100 less, he would have gained 15%. For what value should he sell it in order to gain 25%?

- (A) 1200 (B) 1500
(C) 2500 (D) 2000

Directions 75 to 77: A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

75. CGK, EJP, GMU, ?

- (A) IRT (B) IPZ
(C) FNV (D) JLN

76. 27, 32, 30, 35, 33, ?

- (A) 28 (B) 31
(C) 36 (D) 38

77. AZ, CX, FU, ?

- (A) JQ (B) KP
(C) IR (D) IV

78. Pointing towards a woman, Ram said, "She is the daughter of my father's sister". How is the woman related to Ram?

- (A) Aunt (B) Cousin
(C) Mother (D) Sister

79. What is the value of $\frac{\sqrt{24} + \sqrt{216}}{\sqrt{96}} = ?$
- (A) $2\sqrt{6}$ (B) 2
(C) $6\sqrt{2}$ (D) $\frac{2}{\sqrt{6}}$

Direction 80 to 82: Select the odd word/letter from given alternatives.

80. (A) Shimla (B) Darjeeling
(C) Ooty (D) Agra
81. (A) ABC (B) GHI
(C) DEF (D) JKL
82. (A) Mumbai (B) New Delhi
(C) Kolkata (D) Chennai
83. What is the greatest number that will exactly divide 1365, 1560 and 1755?
(A) 13 (B) 65
(C) 195 (D) 207
84. Which of the following are examples of analog computer?
(A) Signal Frequency
(B) Voltage
(C) Resistance of a capacitor
(D) All of the above

Direction 85 to 87: Study the following information to answer the given questions.

Eight friends A, B, C, D, E, F, G and H are sitting in a circle facing the centre, not necessarily in the same order. D sits third to the left of A. G is second to the right of B. E sits to the immediate right of A. B is third to the left of D. C is an immediate neighbour of B. C is third to the left of H.

85. Who amongst the following is sitting exactly between F and D?
(A) C (B) E
(C) H (D) A
86. Who amongst the following are immediate neighbours of G?
(A) CA (B) FA
(C) CD (D) FD
87. Who amongst the following is sitting second to the left of H?
(A) E (B) B
(C) A (D) G
88. The sum of the ages of a father and his son is 100 years now. 5 years ago, their ages were in the ratio of 2 : 1. Find the ratio of the ages of father and son after 10 years.
(A) 4 : 3 (B) 5 : 3
(C) 3 : 5 (D) 10 : 7
89. E is the mother of A and B. If D is husband of B, then what is E to D?
(A) Mother (B) Aunt
(C) Mother-in-law (D) Sister

90. In the following question, based on the given statement which of the following conclusion(s) is/are follow.

Statements: I. Some pins are cups.

II. No cup is book.

Conclusions: I. Some pins are books.

II. Some pins are not books.

(A) Only conclusion (I) follows

(B) Only conclusion (II) follows

(C) Both conclusion follow

(D) Neither conclusion (I) nor conclusion (II) follows

91. Which of the following is the folk dance of Punjab?
(A) Bhangra (B) Nautanki
(C) Tamasha (D) Macha
92. What is the full form of CSMA?
(A) Carrier Sense Multiple Access
(B) Collision Sense Model Arrangement
(C) Carrier Sense Model Access
(D) Collision Sense Multiple Access
93. National Youth Day is observed on which date?
(A) 10 January (B) 12 January
(C) 14 January (D) 16 January
94. On which date WHO declared the coronavirus a global emergency?
(A) 29 Jan 2020 (B) 30 Jan 2020
(C) 31 Jan 2020 (D) 28 Jan 2020
95. A reduction in the price of apples enables a person to purchase 3 apples for ₹ 1 instead of ₹ 1.25. What is the percentage of reduction in price?
(A) 20% (B) 25%
(C) 30% (D) $33\frac{1}{3}\%$
96. Tiger Triumph is a bilateral tri-service amphibious military exercise between India and _____.
(A) United States of America
(B) United Kingdom
(C) France
(D) Israel
97. Which day is observed every year as World Rabies Day?
(A) 28th October (B) 28th September
(C) 26th October (D) 26th September
98. Which state government has launched e-Ganna App for sugarcane farmers?
(A) Chhattisgarh (B) Uttar Pradesh
(C) Maharashtra (D) Gujarat
99. The first batch of five Rafale Aircrafts Landed at which India Airbase?
(A) Amritsar Airbase (B) Chandigarh Airbase
(C) Pathankot Airbase (D) Ambala Airbase
100. Where was the first case of COVID-19 seen outside china?
(A) Italy (B) Spain
(C) India (D) Thailand

Name:

Mobile: Ph No:

Subject: Date of Exam:

ROLL NO.	MOBILE NUMBER	Important Instructions
1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	Correct Method A B ☒ D Wrong Method A ☒ X ☒ ☒ • Marks should be dark and completely fill the circle. • Rough work must not be done on the answer sheet. • Make the marks only in the space provided. • Please do not make any stray marks on the answer sheet.

1	A B C D	21	A B C D	41	A B C D	61	A B C D	81	A B C D
2	A B C D	22	A B C D	42	A B C D	62	A B C D	82	A B C D
3	A B C D	23	A B C D	43	A B C D	63	A B C D	83	A B C D
4	A B C D	24	A B C D	44	A B C D	64	A B C D	84	A B C D
5	A B C D	25	A B C D	45	A B C D	65	A B C D	85	A B C D
6	A B C D	26	A B C D	46	A B C D	66	A B C D	86	A B C D
7	A B C D	27	A B C D	47	A B C D	67	A B C D	87	A B C D
8	A B C D	28	A B C D	48	A B C D	68	A B C D	88	A B C D
9	A B C D	29	A B C D	49	A B C D	69	A B C D	89	A B C D
10	A B C D	30	A B C D	50	A B C D	70	A B C D	90	A B C D
11	A B C D	31	A B C D	51	A B C D	71	A B C D	91	A B C D
12	A B C D	32	A B C D	52	A B C D	72	A B C D	92	A B C D
13	A B C D	33	A B C D	53	A B C D	73	A B C D	93	A B C D
14	A B C D	34	A B C D	54	A B C D	74	A B C D	94	A B C D
15	A B C D	35	A B C D	55	A B C D	75	A B C D	95	A B C D
16	A B C D	36	A B C D	56	A B C D	76	A B C D	96	A B C D
17	A B C D	37	A B C D	57	A B C D	77	A B C D	97	A B C D
18	A B C D	38	A B C D	58	A B C D	78	A B C D	98	A B C D
19	A B C D	39	A B C D	59	A B C D	79	A B C D	99	A B C D
20	A B C D	40	A B C D	60	A B C D	80	A B C D	100	A B C D
Correct		Correct		Correct		Correct		Correct	
Incorrect		Incorrect		Incorrect		Incorrect		Incorrect	
Marks		Marks		Marks		Marks		Marks	
Student's Signature		Maximum Marks		Marks Obtained		Marks in %		Remarks	