

National Council of Science Museums  
(Ministry of Culture, Govt. of India)  
Block-GN, Sector-V, Bidhan Nagar  
Kolkata: 700091

Main examination for recruitment of Assistants in NCSM

Name of the candidate \_\_\_\_\_  
Form no. \_\_\_\_\_

Date: 20/05/2017  
Time allowed: 3 hours

(Marks 2x20)

**Arithmetic & Quantitative Aptitude**

**Directions: - Question 1 to 5** – what should come in place of the question mark (?) in the following questions?

- (1)  $22.5 \times 32.4 \div 4.5 =$  (?)  
(a) 164 (b) 152 (c) 158 (d) 166 (e) None of these
- (2)  $3055 \div 25 \times 3.4 + 125 =$  (?)  
(a) 520.50 (b) 418.28 (c) 662.68 (d) 540.48 (e) None of these
- (3)  $(5)^2 \times (25)^3 \times 125 =$  (5)(?)  
(a) 9 (b) 7 (c) 8 (d) 11 (e) None of these
- (4)  $\frac{3}{4}$  of  $\frac{2}{5}$  of  $\frac{2}{3}$  of (?) = 1616  
(a) 8080 (b) 8000 (c) 8050 (d) 8020 (e) None of these
- (5)  $\sqrt{1764} \times \sqrt{576} + (4)^2 =$  (?)<sup>2</sup>

**Directions: - Question 6 to 20** – study the information given below and answer the questions that follow:-

- (6) An article was bought for ₹5600. Its price was marked up by 12%. There after it was sold after a discount of 5% of the marked price. What was the marked price of the article?  
(a) ₹6027 (b) ₹6242 (c) ₹6292 (d) ₹6192 (e) ₹6272
- (7) What was the percent profit on the transaction?  
(a) 6.8% (b) 6.3% (c) 6.4% (d) 6.6% (e) 6.2%
- (8) The average weight of 21 boys was recorded as 64Kgs. If the weight of the teacher was added, the average increased by one Kg. What was the teacher's weight?  
(a) 86Kgs (b) 64 Kgs (c) 72 Kgs (d) 98 Kgs (e) None of these

- (9) What would be simple interest accrued in 4 years on a principal of ₹18440 @15% per annum?
- (a) 11075 (b) 12250 (c) 11500 (d) 12985 (e) None of these
- (10) A truck covers a distance of 640 Kms in 10 hours. A car covers the same distance in 8 hours. What is the respective ratio between the speed of the truck and the car?
- (a) 3:4 (b) 1:2 (c) 5:6 (d) 6:7 (e) None of these
- (11) The sum of 15% of a positive number and 20% of the same number is 126. What is one-third of that number?
- (a) 360 (b) 1080 (c) 120 (d) 40 (e) None of these
- (12) Gopal scored 80% marks in five subjects; viz., Hindi, Science, Maths, English & Sanskrit together, wherein the maximum marks of each subject were 105. How many marks did Gopal score in science if he scored 89 marks in Hindi, 92 marks in Sanskrit, 98 marks in Maths and 81 marks in English?
- (a) 60 (b) 75 (c) 65 (d) 70 (e) None of these
- (13) What is the difference between the compound interest and simple interest accrued on an amount of ₹16,200.00 at the end of 3 years @ 25% (rounded off up to two digits after decimal)?
- (a) ₹3213.44 (b) ₹3302.42 (c) ₹3495.28 (d) ₹3290.63  
(e) None of these
- (14) The area of a rectangle is equal to the area of a circle with circumference equal to 39.6 metres. What is the length of the rectangle if its breadth is 4.5 metres?
- (a) 33.52 metres (b) 21.63 metres (c) 31.77 metres (d) 27.72 metre  
(e) None of these
- (15) On Children's day sweets were to be equally distributed amongst 300 children. But on that particular day, 50 children remained absent. Hence each child got one sweet extra. How many sweets were distributed?
- (a) 1450 (b) 1700 (c) 1500 (d) 1650 (e) Cannot be determined
- (16) 3 Women and 18 children together take two days to complete a piece of work. How many days will 9 children alone take to complete the piece of work if 6 women alone can complete the piece of work in three days?
- (a) 9 (b) 7 (c) 5 (d) 6 (e) None of these



- (17) A reservoir can be filled by two taps in 6 hours and 9 hours respectively. The first tap was opened at 7 AM and the second tap at 8 AM. At what O' clock will the reservoir be full?  
 (a) 11 P.M. (b) 12 Noon (c) 1 P.M. (d) 11 A.M. (e) None of these
- (18) The LCM and HCF of two numbers are 4125 and 25 respectively. One number is 375. Find by how much is the second number less than the first?  
 (a) 100 (b) 50 (c) 75 (d) 25 (e) None of these
- (19) Average age of a father and his two sons is 27 years. Five years ago, the average age of the two sons is 12 years. If the difference between the ages of the two sons is 4 years, then the present age of the father is  
 (a) 34 years (b) 47 years (c) 64 years (d) 27 years  
 (e) None of these
- (20) The time of oscillation of a pendulum varies as the square root of its length. If a pendulum of length 40 cm oscillates once a second, then the length of the pendulum oscillating once in 2.5 second is  
 (a) 175 cm (b) 200 cm (c) 225 cm (d) 150 cm (e) 250 cm

### English Grammar

(Marks 1x15)

**Directions: Question 21 to 25:-** In the following questions, choose the word **opposite** in meaning to the given word and mark it in the answer sheet

21) Emancipate

- (a) Endanger (b) Enslave (c) Evict (d) Entice

22) Malign

- (a) Protect (b) Promote (c) Praise (d) Pacify

23) Energetic

- (a) Passive (b) Weakened (c) Obtuse (d) Lethargic

24) Perpetual

- (a) Incidental (b) Occasional (c) Accidental (d) Intermittent

25) Barbarous

- (a) Civil (b) Civilised (c) Calm (d) Cool

**Directions: Questions 26 to 30:-** In the following questions, four alternatives are given for the idioms/phrase in bold in the sentence. Choose the alternative which best expresses the meaning of the idioms/phrase and mark it in the answer sheet

- 26)The children had to **shift for themselves** after their parents died
- (a) Move house on their own
  - (b) Leave their old town and friends
  - (c) Look after themselves without help
  - (d) Cook their own food
- 27)The troops paid a **backhanded compliment** to the officer
- (a) Returned the compliment
  - (b) Made an uncharitable remark
  - (c) Made an ambiguous statement of praise
  - (d) Paid an undeserved compliment
- 28)He slapped him first and gave him a kick **into the bargain**
- (a) Again & again
  - (b) Two or three times
  - (c) Over & above
  - (d) After sometime
- 29)All the facts will **bear me out** in these statements
- (a) Go against me
  - (b) Prove nothing
  - (c) Confirm the truth
  - (d) Support me
- 30)Retrenchment is **the order of the day** as recession overtakes Indian industry
- (a) An admirable practice
  - (b) A common practice
  - (c) A general rule
  - (d) A popular measure



**Directions: Question 31 to 35** – In the following passage, some of the words have been left out. First read passage over and try to understand what it is about. Then fill in the blanks with the help of the alternatives given below the passage. Mark your answer in the answer sheet.

**Passage**

The British lived in India for nearly a hundred and fifty years but they remained foreigners to the last, unlike all other foreign people who had come to India before they took for themselves everything they \_\_\_\_\_ get from our land and \_\_\_\_\_ people leaving the country in a \_\_\_\_\_ and more miserable condition these \_\_\_\_\_ had ever seen before. How \_\_\_\_\_ we allow this to happen?

- 31)        a) would        b) can        c) could
- 32)        a) our        b) their        c) poor
- 33)        a) poorer        b) richer        c) wretched
- 34)        a) we        b) they        c) it
- 35)        a) should        b) did        c) can

**English comprehension**

(Marks 15)

**Directions Question 36 to 50** - In this section, you have three short passages. After each passage, you will find five items based on the passage. First read passage I and attempt the items based on it. Then go on to the next passage and attempt the items based on the same. Write your answer on the answer sheet provided separately.

**Passage - I**

In the wealthier nations, newspapers were now produced in such large numbers as to bring about the emergence of what is called the mass circulation press. Advances in education had made literacy progress and more people were able to buy newspapers, both because wages had risen and because the newspapers were cheaper. Other factors favouring the mass press included the adoption of printing techniques which introduced long runs; circulation by railways and other fast means of transport, the financial support provided by advertising, and not least, the increased flow of up-to-date news transmitted by telegraph, telephones, fax and e-mail services.

- 36) The phrase mass circulation press means the press
- (a) That is owned by a very large number of people;
- (b) That responds to opinions of the masses;
- (c) That has a large circulation among the masses;
- (d) That is popular among the masses.



37) More and more people are able to buy newspapers now because

- (a) They have become cheaper than before;
- (b) More people are educated now than ever before;
- (c) They are easily available in shops and news stalls;
- (d) They have become more interesting than ever before.

38) The improvement in the economic conditions of the people has led people to

- (a) Give up the habit of newspaper reading in favour of popular entertainments;
- (b) Buy newspapers;
- (c) Have better education;
- (d) Go in for sensational newspapers and magazines

39) Newspapers are easily available everywhere because of the easy availability of

- (a) Televisions and other electronic devices;
- (b) Fax machines;
- (c) Telegraphs and telephones;
- (d) Fast means of transport

40) According to this passage, the mass production of newspapers has become possible because

- (a) Newsprint is easily available;
- (b) Big business houses are interested in promoting their sales;
- (c) The increase in advertisement has augmented their financial support;
- (d) The government agencies are interested in popularising their views through them.

## Passage - II

Recently, a newspaper article mourned the total disappearance of the common house sparrow. This was a comment on the city's perceptible move towards edging out the flora and fauna of the city. In the rapid urbanization, multi-storied apartments grew and large scale felling of trees became necessary. Last week, however, seven pairs of these sparrows were spotted in a suburb. Possibly the greenery of this place has created a new habitat for these birds which have liked their proximity to human beings, and have made a comeback. A systematic development of trees and shrubs all over the city could woo the absentee house sparrow to our midst.

41) According to the passage, the house sparrows

- (a) Have already become an endangered species;
- (b) Have been systematically driven out of the cities;
- (c) Like to live in small towns;
- (d) Do not like to live in areas which do not have greenery.



42) The decrease in the number of house sparrows in urban areas is because of

- (a) The felling of trees;
- (b) Poor maintenance of gardens;
- (c) Severe water shortage;
- (d) They are being driven out by the residents.

43) In this passage the term 'urbanisation' has been used to refer to

- (a) The destruction of the greenery in the city;
- (b) Construction of concrete structures on a large-scale;
- (c) A change over from the rural life to the city life;
- (d) The movement of people from villages to cities

44) The phrase 'absentee house sparrow' refers to

- (a) the sparrow that makes infrequent visits;
- (b) the sparrow that has forgotten its habitat;
- (c) the sparrow that has gone away from the urban areas;
- (d) the sparrow that has become extinct.

45) According to the passage, the birds have made a come-back to the suburb because they

- (a) have been hunted down by the village people;
- (b) love to be amidst human beings;
- (c) get food only where human beings live;
- (d) they have been deliberately brought back by biologists.

### Passage - III

A mask is a covering for the head or face. It was one of the first ways in which primitive man expressed his artistic instinct. Primitive tribes used masks to ensure a good harvest, a safe hunt and to ward off evil. Masks were also worn by merry-makers at festivals. Masks of change are believed to turn the wearer into the spirit, animal or demon that the mask depicts. Thus the shaman (medical man) masks of the Eskimos are supposed to establish a mystic link with the spirit concerned. They induce a state of trance and possession before effecting a cure.

46) To the primitive man, the mask was an indication of

- (a) His instinct of fear;
- (b) His desire to hide his identity;
- (c) His aesthetic and creative sense;
- (d) The expression of his identity.

47) The wearing of mask was supposed to

- (a) Ensure regular rainfall;
- (b) Protect the masked person from the elements;
- (c) Safeguard the masked person from the evil spirit;
- (d) Differentiate the members of one tribe from another



48) 'Masks of change' were supposed to

- (a) Transform the masked person into what the mask depicted;
- (b) Help actors to play several roles
- (c) Be worn only by the older members of the tribe;
- (d) Drive out the ghosts that haunted the homes of tribesmen.

49) The masks worn by shamans helped them

- (a) Conceal their identity while attempting to cure a sick person;
- (b) Create a link with the spirits in order to cure the sick;
- (c) Overcome their shyness;
- (d) Protect themselves from infection.

50) In order to cure a patient, the shaman tried to

- (a) Make him aware of his disease;
- (b) Hypnotize him
- (c) Scare him of the dangers of sickness;
- (d) Subjugate him.

51) Write a précis on the Para given below in about 150 words and give a suitable title.

(Marks 15)

A change of CJI completely reversed the line of judicial scrutiny of PILs that were pending in the Supreme Court seeking repatriation of the Kohinoor to India nearly 170 years after it left our shores to become a part of British royalty. CJI T S Thakur had entertained the PILs and even asked the Centre to specify what steps were being taken to bring back the Kohinoor. But his successor Justice J S Khehar took no time to dismiss them. Who was right – Justice Thakur or Justice Khehar? We are not to judge it. But lack of uniformity in entertaining petitions and PILs, process of scrutiny and judicial decisions raise doubts in the minds of litigants. Take for example the PILs relating to Aadhaar cards, whose constitutional validity is under challenge. The SC in its interim order had said it could be made mandatory for certain schemes but otherwise it would continue to be voluntary. A few days ago, a bench headed by CJI Khehar had clarified that Aadhaar may not be made mandatory for social welfare schemes. However, the CJI had said there was no bar on the government making Aadhaar mandatory for income tax returns, mobile phone connections and other such services outside welfare schemes. Another bench asked the government how it could make Aadhaar mandatory for PAN, quoting which is a must in filing income tax returns. Not long ago, when a politician had brought a PIL accusing RJD chief Lalu Prasad and his wife of having amassed disproportionate assets, an SC judge heading a bench had dismissed the petition saying the court must not be an arena for setting political battles. The very same judge, later, entertained a PIL by another politician levelling similar charges against SP chief Mulayam Singh Yadav and his kin. He ordered the CBI to investigate the case. In exercise of judicial discretion, jurists have time and again asked judges not to forget the cardinal principle of uniformity, a basic principle of jurisprudence that promotes equity, judicial integrity and fairness.



Who will remedy it, except the judges themselves? The remedy would have come had the judges paid attention to what Justice Robert H Jackson said in *Brown v Allen* [344 US 443 (1953)], "Whenever decisions of one court are reviewed by another, a percentage of them are reversed. That reflects a difference in outlook normally found between personnel comprising different courts. However, reversal by a higher court is not proof that justice is thereby better done. There is no doubt that, if there were a super-Supreme Court, a substantial proportion of our reversals of state courts would also be reversed. We are not final because we are infallible, but we are infallible only because we are final."

52. Write an essay in about 300 words on any one of the topics given below:-

(Marks 15)

- (a) Digital Technology      (b) Rural India      (c) Science Popularization  
(d) Employment generation

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