<mark>N O T I C E</mark>

QUESTION PAPER AND ANSWER KEY OF ONLINE PROCTORED TEST FOR THE POST OF "JUNIOR ASSISTANT (MULTI-SKILL)" WHICH WAS HELD ON 07-11-2021

[Against Advt. No. IISER-K/Rectt. NT-01/2018/Admn., Dated 25.05.2018]

1. The Online Proctored Test for the post of **Junior Assistant (Multi-Skill)** was conducted on **07-11-2021 (Sunday)** from **10.00 am to 11.00 am.**

2. The <mark>Question Paper and Answer Keys</mark> of the questions, in random series, of the said test are now available on the Institute website to be accessed by a candidate.

3. Candidates can file their objection related to the Question (s)/ Answer Key (s).

4. Candidates can send the details to the email jobs@iiserkol.ac.in in this order –
   i)   Name
   ii)   Application Number
   iii)   Objecting Question No/ Answer Key as per the QP Set/ Answer Key on the website.

5. Objection against Question Paper (s)/ Answer Key (s) for the said test can be filed upto <mark>21.11.2021 (Sunday)</mark> after which no challenge will be accepted and entertained.

6. If any objection is found valid then suitable decision regarding marks for the question (s) will be taken and applied.

7. <mark>**Final results of the Online Proctored Test will be announced on the website after the above process.**</mark>

For any queries or clarifications, candidates can call Administration Help Desk at 033-61360000 (Extn. 2101) or write to us at jobs@iiserkol.ac.in.

This is issued with approval of the Competent Authority.

Date: **09-11-2021**

The Chairman
Selection Committee, IISER Kolkata

JUNIOR ASSISTANT (MULTI-SKILL)
FULL MARKS: 50; TIME: 60 MINUTES

Answer the questions carefully. There are five options for each question, of which only one is correct. Every unattended question shall earn you 0 marks. Every correctly answered question shall earn you the assigned marks as indicated at the right of each question. Every incorrectly answered question shall earn you negative one-fourth of the marks indicated at the right.

QUESTIONS & ANSWER OPTIONS	**MARKS**

1. Who was the India's First Woman Chief Minister of a state?   1

   (a) Smt. Indira Gandhi

   (b) Razia Sultana

   (c) SuchetaKripalani

   (d) Smt. Pratibha Patil

   (e) None of the above

2. Consider the following statements about All India Survey on Higher Education 2018-19:   1

   (i). Gross Enrolment Ratio for male population is 26.3% and for females, it is 26.4%.

   (ii). There are more female teachers in Higher Educational Institutions (HEIs) in India thanmales.

   (iii). UP and Karnataka have more female enrolment in higher education as compared to other states.

   Which of the above statement(s) is/are correct?

   (a) (i) and (ii) only

   (b) (i) only

   (c) (i) and (iii) only

   (d) (i), (ii) and (iii)

   (e) None of the above

3. Fly Ash is a proven resource material for many industrial applications and road constructions. Fly ash primarily consists of: 1

   (a) Oxides of Ca, Si and Al.

   (b) Carbides of Al, Fe and Ca.

   (c) Sulphates of Ca, Mg and Al.

(d) Nitrides of Si, Mg and Al.

(e) None of the above

4. International Development Association (IDA) is called the 'soft' window of the World Bank (WB) because _____: 1

(a) It lends for software and IT development.

(b) Taking loans from it is very easy

(c) Its loans are interest free

(d) All of (a)-(c).

(e) None of (a)-(c)

5. Difference-in-difference (DID) model is a type of _____ :   1

(a) Statistical and Econometric model

(b) Environment Impact Assessment model

(c) Cost-benefit Analysis approach

(d) Banking Stress Analysis model

(e) None of the above

6. Art forms an integral part of the Constitution of India. Which of the following statement(s) is/are correct regarding it?   1

(i). Illustrations in the constitution include only one female lead- Rani Laxmibai.

(ii). The constitution was calligraphed by Nandalal Bose.

(iii). PremBehariNarainRaizada worked on the borders of each page.

Select the correct answer from the given options below:

(a) (i) only

(b) (i) and (ii) only

(c) (iii) only

(d) (i), (ii) and (iii)

(e) None of the above

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7. Which of the following statements is/are correct regarding Ramanujan Machine? 2

   (i). It is an algorithm that performs an unconventional function.

   (ii). It is developed by scientists from Israel Institution of Technology.

   (iii). It is developed by the Indian Mathematician S Ramanujan.

   Select the correct answer from the given options below:

   (a) (i) only

   (b) (ii) only

   (c) Both (i) and (ii)

   (d) Both (i), (ii) and (iii)

   (e) (iii) only

8. The first Indian woman musician who got Bharat Ratna is: 1

   (a) Lata Mangeshkar
   (b) Asha Bhosle
   (c) M.S.Subbulakshmi
   (d) Girija Devi
   (e) None of the above

9. Which one of the following statements about 3D Printed Pill, that was in news recently, is correct? 1

   (a) It is an antibiotic developed to target Multidrug Resistant Bacteria.

   (b) It is a newly developed vaccine to prevent SARS-CoV-2 virus disease.

   (c) It is developed to assess gut bacteria throughout the gastrointestinal (GI) tract.

   (d) It is a newly developed contraceptive pill.

   (e) None of the above

10. Consider the following statements regarding famous Indian poet Kamini Roy. 1

    (i). Kamini Roy was the first Indian woman to have graduated with honours in Bengali.

    (ii). She published her first book of poetry, "AloO Chhaya" in 1889.

(iii). Kamini Roy was the first Indian woman to have graduated with honors in Sanskrit.

Which of the statement(s) given above is/ are correct?

    (a) (i) only

    (b) (ii) only

    (c) (iii) only

    (d) Both (i) and (ii)

    (e) Both (ii) and (iii)

11. Cytokine storm refers to: 1

    (a) Capacity to cause more infections in a disproportionately large number of people.

    (b) A condition wherein there is not enough oxygen available to the blood.

    (c) A severe immune reaction triggered by the body to fight an infection.

    (d) An immune system disorder caused by COVID-19.

    (e) None of the above

12. Which of the following are components of Central Processing Unit (CPU)?   1

    (a) Arithmetic logic unit, Mouse

    (b) Arithmetic logic unit, Control unit

    (c) Arithmetic logic unit, Integrated Circuits

    (d) Control Unit, Monitor

    (e) None of the above

13. Which type of software is an operating system?   1

    (a) Utility Software

    (b) System Software

    (c) Application Software

    (d) Firmware Software

    (e) None of the above

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14. Pick the correct answer choice for filling the blank in the following sentence.　　1
    Robin has a bad habit of _____ at an odd hour

    (a) turning in

    (b) turning up

    (c) turning over

    (d) turning off

    (e) None of the above

15. A computer virus that actively attacks an anti-virus program or programs in an effort to　　1

    prevent detection is:

    (a) Worm

    (b) Retrovirus

    (c) Trojan

    (d) Ghost virus

    (e) None of the above

16. Replace the underlined word in the sentence with one of the phrasal verbs given below.　　1
    I can't <u>tolerate</u> my neighbour's noise any longer; it's driving me mad.

    (a) put off

    (b) put up with

    (c) act on

    (d) ask out

    (e) None of the above

17. In MS-Excel what does SUMIF function do?　　1

    (a) Adds up cell values based on a condition

    (b) Adds up all the numbers in a range of cells

    (c) Returns a subtotal in a list or database

    (d) Both (a) & (b)

    (e) None of (a)-(c).

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18. If you will be displaying or printing your document on another computer, you will want   1

    to make sure and select the _____ option under the 'save' tab

    (a) Embed Fonts

    (b) Embed True Type Fonts

    (c) Save True Type Fonts

    (d) Save Fonts

    (e) None of the above

19. Read the following information carefully and answer the question.   2

    Sangeeta, Ramesh, Sunil, Siddhartha, Shruti, Rajesh and Raman are playing cards

    sitting around a circular table. Siddhartha is not the neighbor of Sunil or Shruti.

    Sangeeta is the neighbor of Rameshand Sunil. Raman, who is second to the left of

    Siddhartha is the neighbor of Shruti and Rajesh.

    Who is sitting between Sangeeta and Siddhartha?

    (a) Sunil

    (b) Ramesh

    (c) Raman

    (d) Shruti

    (e) Rajesh

20. Choose the correct answer for filling the blank in the following sentence.   1

    The Sun _____, the fog dispersed.

    (a) had been risen

    (b) having been risen

    (c) having risen

    (d) has risen

    (e) none of the above

21. 'Holding the mouse button down on a file/folder while moving the mouse'. Which MS   1

    word processing function is this?

    (a) Cut

(b) Paste

(c) Dragging

(d) Copy

(e) None of the above

22. Which MS-Excel formula below includes a range   2

(a) =Sum(C5:C11)

(b) =C5+D11

(c) =B4.B5

(d) =B4*B5

(e) =C5-D11

23. Fill in the blank with the correct modal auxiliary.   1
    If you are the owner of this stable, you _____ be able to tell us which of the

    bulls is blind.

(a) should

(b) shall

(c) would

(d) might

(e) none of the above

24. Choose the correct sentence.   1

(a) My sister is the poet and the philosopher.

(b) My sister is a poet and the philosopher.

(c) My sister is a poet and a philosopher.

(d) My sister is a poet and philosopher.

(e) None of the above.

25. Find the correct spelt word.   1

(a) Adventitious

(b) Adventious
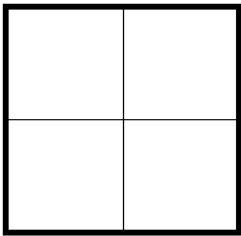
(c) Adventitus

(d) Adventitous

(e) None of the above

26. Choose the correct answer from the following.   1

These students _____ English for the last five years in the school.

(a) are studying

(b) was studying

(c) have been studying

(d) study

(e) None of the above

27. From the given alternatives, choose the one which best expresses the given sentence in   1
active/passive voice.
The boys were praying cricket.

(a) Cricket had been played by the boys.

(b) Cricket has been played by the boys.

(c) Cricket was played by the boys.

(d) Cricket was being played by the boys.

(e) None of the above

28. Pick up the correct antonym of the word "Extensive".   1

(a) Expensive

(b) Concrete

(c) Compact

(d) Narrow

(e) None of the above

29. A ternary number (3 base) system is formed with the digits 0, 1, and 2 only. The value of   1

ternary number 201 in decimal number system will be –

(a) 16

(b) 19

(c) 21

(d) 22

(e) None of the above

30. Suppose, there is a sequence of ten consecutive positive odd numbers. The average of the first two and the last two numbers in this sequence is 38. Then the average of rest of six numbers in this sequence will be: 1

  (a) 38

  (b) 36

  (c) 37

  (d) 39

  (e) None of the above

31. The smallest 5 digitpositive number which is divisible by 3, 5, 11, 15 and 18 is -   1

  (a) 10000

  (b) 10890

  (c) 20385

  (d) 20980

  (e) None of the above

32. From a square of unit length, we can have 4 squares of ½ unit length as shown in the following figure.   2

Similarly, how many cubes of 1/3 unit length can be made from a cube of unit length?

  (a) 4

  (b) 8

  (c) 9

  (d) 27

(e) None of the above

33. A right circular cylinder and a right circular cone have same height (h) and same base area of radius r. The difference of their volume will be   2

   (a) $\pi r^2 h$

   (b) $\frac{\pi r^2 h}{4}$

   (c) $\frac{\pi r^2 h}{3}$

   (d) $\frac{2\pi r^2 h}{3}$

   (e) None of the above

34. A circle inside a square, touches all the four sides of the square but does not come out of the square. If the length of each side of the square is $2a$ unit, the area of the circle is   2

   (a) $\frac{\pi a^2}{4}$

   (b) πa^2

   (c) $2\pi a^2$

   (d) $4\pi a^2$

   (e) None of the above

35. Suppose a new scale (X) of temperature has been established which indicates the temperature of freezing point of water as -20^0X and the temperature of boiling point of water as 130^0X. Then which temperature has the same value in both Celsius scale and in this new temperature scale?   2

   (a) $- 50^0$

   (b) $- 40^0$

   (c) 40^0

   (d) 50^0

   (e) None of the above

36. Suppose two cars A and B are moving to each other, and each is traveling at a speed of 20 m/s. If car A begins to beep its horn at a frequency of 320 Hz, what is the   2

frequency perceived by the car B? (velocity of sound is 340 m/s).

(a) 284.4 Hz

(b) 320 Hz

(c) 340 Hz

(d) 360 Hz

(e) None of the above

37. In which of the following cases minimum amount of heat energy is required (Specific heat of water is 1 calg^{-1} C^{-1}, Latent heat of fusion is 80 calg^{-1} and Latent heat of vaporization is 540 calg^{-1}) ?   2

(a) 1kg of ice at 0^0C is converted into a mixture of 400g of ice and 600g of water.

(b) 500g of ice at 0^0C is converted into 500g of water at 0^0C.

(c) 50g of water at 0^0C is converted into 50g of water at 100^0C.

(d) 10g of water at 100^0C is converted into 10g of steam at 100^0C.

(e) 1g of ice at 0^0C is converted into 1g of steam at 100^0C.

38. Fill in the blank with appropriate preposition.   1
Shyamlal was fond _____ children.

(a) for

(b) of

(c) to

(d) on

(e) None of the above

39. Put the correct preposition.   1
Newly acquired freedom is sometimes liable _____ abuse.

(a) to

(b) on

(c) of

(d) for

(e) None of the above

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40. A cubical wooden block is floating horizontally in a liquid by keeping one-third of its volume above the liquid. If the length of the wooden block is 5 cm and its density is 800 kg/m^3, then the buoyant force of the liquid is

2

   (a) 0.5 N

   (b) 1 N

   (c) 1.5 N

   (d) 2 N

   (e) None of the above

JUNIOR ASSISTANT (MULTI-SKILL)
FULL MARKS: 50; TIME: 60 MINUTES

ANSWER KEYS TO QUESTIONS

Question Number	Answer	Marks
1	C	1
2	C	1
3	A	1
4	C	1
5	A	1
6	A	1
7	C	2
8	C	1
9	D	1
10	C	1
11	C	1
12	B	1
13	B	1
14	B	1
15	B	1
16	B	1
17	A	1
18	A	1
19	B	2
20	C	1
21	C	1
22	A	2
23	A	1
24	D	1
25	A	1
26	C	1
27	D	1
28	D	1
29	B	1
30	A	1
31	B	1
32	D	2
33	D	2
34	B	2
35	C	2
36	D	2
37	E	2
38	B	1
39	A	1
40	B	2