

**भारतीय प्रौद्योगिकी संस्थान जोधपुर**  
**INDIAN INSTITUTE OF TECHNOLOGY JODHPUR**  
**कनिष्ठ सहायक चयन/SELECTION OF JUNIOR ASSISTANT**

Time: 1 hour

Date of Exam: 27<sup>th</sup> April, 2014

Maximum Marks: 80

कृपया निर्देशों को सावधानी पूर्वक पढ़ें | विशेषतः इसके लिए आपको ५ मिनट दिए गए हैं |

Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

**निर्देश / INSTRUCTIONS**

**अ./A. सामान्य / GENERAL**

१. रफ कार्य के लिए अतिरिक्त पृष्ठ नहीं दिए जायेंगे / 1.No additional sheets will be provided for rough work.
२. परीक्षा कक्ष में किसी भी प्रकार के सादे कागज, क्लिप बोर्ड, लाग सारणी, लघुगणक(स्लाईड पट्टी), कैलकुलेटर, सेल फोन, पेजर एवं इलेक्ट्रॉनिक उपकरण के प्रयोग की अनुमति नहीं है / 2. Blank papers, clipboards, log tables, slide rules, calculators, cellular phones, pagers and electronic gadgets of any kind are NOT allowed in the Examination Hall.
३. अपना नाम और पंजीकरण संख्या (रजिस्ट्रेशन नंबर) उत्तर पत्र में निर्धारित स्थान पर बड़े अक्षरों में लिखें / 3. Write your name and registration number in the space provided on the Objective Response Sheet in INK and in CAPITAL LETTERS.
४. निरीक्षक के अनुदेश से पहले प्रश्न पत्र की सीलें ना तोड़ें / 4. Do not break the seals of the question-paper booklet before being instructed to do so by the invigilators.
५. हल किये गए कुल प्रश्नों की संख्या शब्दों और अंकों में अवश्य लिखें / 5. Total number of questions attempted must be written in Numerics and in Words.
६. प्रश्न पत्र बुकलेट में 62 प्रश्न और 8 पृष्ठ हैं / 6. The Question Paper booklet contains 8 pages having 62 questions.
७. सील तोड़ने के बाद कृपया सुनिश्चित कर लें की सारे प्रश्न स्पष्टतः पठनीय हैं / 7. On breaking the seal, please check that all questions are legible.

**ब. अंक निर्धारण पद्धति / B. MARKING SCHEME**

१. प्रत्येक एकाधिक पसंद सवाल का केवल एक सही उत्तर है/ 1. Each multiple choice question has only one correct answer.
२. प्रश्नों 1 से 60 के प्रत्येक सही उत्तर के लिए आपको 1 अंक और प्रत्येक अनुत्तरित प्रश्न के लिए शून्य अंक दिए जायेंगे | शेष सभी मामलों में ऋण 1/2 अंक प्रदान किये जायेंगे / 3. For questions 1 to 60 each correct answer you will be awarded 1 mark, zero marks if no answer is written. In all other cases minus - 1/2 mark will be awarded.

Please return the question booklet along with objective responsive sheet (ORS)

NAME: \_\_\_\_\_

REGISTRATION NUMBER: \_\_\_\_\_

## GENERAL KONWLEDGE

1. Which one is the correct statement?
  - A. IIT Jodhpur was started in 2009 with three engineering branches.
  - B. IIT Jodhpur was started in 2008 with three engineering branches.
  - C. IIT Jodhpur was started in 2008 with five engineering branches.
  - D. IIT Jodhpur was started in 2009 with four engineering branches.
2. Total number of IITs in India:
  - A. 15 B. 16
  - C. 13 D. 17
3. The minimum age required to contest in Lok Sabha election is:
  - A. 19 B. 18
  - C. 25 D. 23
4. The YarlungZanboriver, in India, is known as:
  - A. Ganga B. Indus
  - C. Brahmaputra D. Mahanadi
5. The oldest oil refinery in India is:
  - A. Haldia B. Digboi
  - C. Koyali D. Baruni
6. Name of the Indian University, which was started in 1857:
  - A. University of Delhi B. Banaras Hindu University
  - C. Aligarh Muslim University D. University of Calcutta
7. The National Police Academy is located at:
  - A. Bangalore B. Hyderabad
  - C. Delhi D. Dehradun
8. Which year the University Grant Commission (UGC) was established?
  - A. 1951 B. 1953
  - C. 1960 D. 1945
9. The creator of 'Sherlock Holmes' was:
  - A. Arthur Conan Doyle B. Ian Fleming
  - C. Dr. Watson D. Shakespeare
10. The inert gas which is substituted for nitrogen inthe cylenders used by deep sea divers for breathing is:
  - A. Argon B. Xenon
  - C. Helium D. Krypton

11. Light year is a unit of:

- A. Time
- B. Distance
- C. Speed
- D. Intensity of light

12. Plants that grow in saline water are called:

- A. Halophytes
- B. Hydrophytes
- C. Mesophytes
- D. Thallophytes

13. INTERPOL means:

- A. International Political Conference
- B. The International Criminal Police Organization
- C. International Police
- D. International Association of Police Officers

14. Who is the first Indian woman to win a gold in 400m run in the Asian Games?

- A. M.L. Valsamma
- B. P.T. Usha
- C. Kamaljit Sandhu
- D. K. Malleshwari

15. Hockey was introduced in the Asian Games in:

- A. 1962 in Jakarta
- B. 1958 in Tokyo
- C. 1966 in Bangkok
- D. 1970 in Bangkok

16. The centenary of Mahatma Gandhi's arrival in South Africa was celebrated in

- A. May 1993
- B. August 1993
- C. July 1993
- D. September 1993

17. Pulitzer Prize is awarded for outstanding work in the field of:

- A. Science and Technology
- B. Environmental Studies
- C. Literature and Journalism
- D. International Understanding

18. The landmass of which of the following continents is the least?

- A. Africa
- B. Aisa
- C. Australia
- D. Europe

19. 'Dandia' is a popular dance of:

- A. Punjab
- B. Bihar
- C. Tamil Nadu
- D. Gujrat

20. Which of the gas is not known as Greenhouse gas?

- A. Methane
- B. Nitrous Oxide
- C. Carbon dioxide
- D. Hydrogen

21. Heavy water is:

- A. Deuterium Oxide
- B. PH7
- C. Rain water
- D. Tritium Oxide

22. Non-stick cooking utensils are coated with:
- |                |                |
|----------------|----------------|
| A. Teflon      | B. PVC         |
| C. Black paint | D. Polystyrene |
23. What is laughing gas?
- |                    |                      |
|--------------------|----------------------|
| A. Nitrous Oxide   | B. Carbon monoxide   |
| C. Sulphur dioxide | D. Hydrogen peroxide |
24. Air is a/an:
- |                |            |
|----------------|------------|
| A. Compound    | B. Element |
| C. Electrolyte | D. Mixture |
25. What did J. B. Dunlop invent?
- |                          |                         |
|--------------------------|-------------------------|
| A. Pneumatic rubber tyre | B. Automobile wheel rim |
| C. Rubber boot           | D. Model airplanes      |
26. The major constituent of air is:
- |             |                   |
|-------------|-------------------|
| A. Nitrogen | B. Carbon dioxide |
| C. Oxygen   | D. Hydrogen       |
27. The words 'Satyamev Jayate' inscribed below the base plate of the emblem of India are taken from:
- |                     |                     |
|---------------------|---------------------|
| A. Rigveda          | B. Satpath Brahmana |
| C. Mundak Upanishad | D. Ramayana         |
28. Indian Cancer Research Institute is located at:
- |              |            |
|--------------|------------|
| A. New Delhi | B. Kolkata |
| C. Chennai   | D. Mumbai  |
29. The power of Supreme Court of India to decide the dispute between the centre and states falls under its:
- |                          |                                |
|--------------------------|--------------------------------|
| A. Advisory jurisdiction | B. Appellate jurisdiction      |
| C. Original jurisdiction | D. Constitutional jurisdiction |
30. The Shimla Convention is an agreement that sets:
- |                                     |  |
|-------------------------------------|--|
| A. Shimla as a tourist spot         | B. Shimla as the capital of Himachal Pradesh |
| C. Boundary between India and Tibet | D. None of the above.                        |
31. The Vedic deity Indra was the God of:
- |                     |             |
|---------------------|-------------|
| A. Wind             | B. Eternity |
| C. Rain and Thunder | D. Fire     |
32. Which of the following is used in pencils?
- |             |         |
|-------------|---------|
| A. Charcoal | B. Lead |
| C. Graphite | D. Tar  |

33. 'Bar' is the unit for

- A. Speed
- B. Pressure
- C. Current
- D. Hear

34. Radish is:

- A. Bulb
- B. Leaf
- C. Modified root
- D. Tuber

35. Which country will host the FIFA 2014?

- A. India
- B. Italy
- C. Brazil
- D. Germany

#### MATHEMATICS

36. A train speeds past a pole in 15 seconds and a platform 100m long in 25 seconds. The length of the train is:

- A. 50m
- B. 150m
- C. 200m
- D. Data inadequate

37. If selling price is doubled, the profit triples. Find the profit percentage.

- A. 66.7
- B. 100
- C. 105.5
- D. 120

38. A sum of money is kept at a bank with a simple interest. After 3 years, it becomes 815 rupees and next year it turns into 854 rupees. The initial amount deposited in the bank is:

- A. 650 rupees
- B. 698 rupees
- C. 688 rupees
- D. 720 rupees

39. A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?

- A. 3 B. 4
- C. 6 D. 5

40. The angle between the minute hand and the hour hand of a clock when the time is 4:20 AM:

- A. 0° B. 15°
- C. 5° D. 10°

41. Two numbers are 20% and 50% more than a third number respectively. The ratio of the two number is:

- A. 6:7 B. 1:3
- C. 2:3 D. 4:5

42. The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6m away from the wall. The length of the ladder is:

- A. 8.4m
- B. 8.3m
- C. 11.3m
- D. 9.2m

43. The price of 10 chairs is equal to that of 4 tables. The price of 15 chairs and 2 tables together is 4000 rupees. The total price of 12 chairs and 3 tables is:
- A. 3900 rupees  
B. 3600 rupees  
C. 2500 rupees  
D. 3400 rupees
44. Which of the following statement is not correct?
- A.  $\log_{10} 10 = 1$   
B.  $\log_{10} 1 = 0$   
C.  $\log(2 + 3) = \log(2 \times 3)$   
D.  $\log(1 + 2 + 3) = \log 1 + \log 2 + \log 3A$
45. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:
- A. 200 B. 250  
C. 322 D. 340
46. The ratio between the length and the breadth of a rectangular park is 3:2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq.m.) is:
- A. 15360  
B. 153600  
C. 30720  
D. 307200
47. There are two examinations rooms A and B. If 10 students are sent from A to B, then the number of students in each room is the same. If 20 candidates are sent from B to A, then the number of students in A is double the number of students in B. The number of students in room A is:
- A. 110 B. 90  
C. 100 D. 120
48. A bank offers 5% compound interest calculated on half – yearly basis. A customer deposits 1600 rupees each on 1<sup>st</sup> January and 1<sup>st</sup> July of a year. At the end of the year, the amount he would have gained by way of interest is:
- A. 124 rupees  
B. 121 rupees  
C. 120 rupees  
D. 123 rupees
49. If  $5^a = 3125$ , then the value of  $5^{(a-3)}$  is:
- A. 25 B. 125  
C. 625 D. 1625
50. In order to obtain an income of 650 from 10% stock at 96, one must make an investment of:
- A. 8008  
B. 3200  
C. 6240  
D. 6500

#### ENGLISH

Instructions (51 – 55) each question below, there is a sentence of which some parts have been jumbled up. Rearrange these parts which are labelled P, Q, R, and S to produce the correct sentence. Choose the proper sequence.

51. When he

- P. did not know
- Q. he was nervous and
- R. heard the hue and cry at midnight
- S. what to do

The proper sequence should be:

- A. QSPR
- B. RQPS
- C. SQPR
- D. PQRS

52. It has been established that

- P. Einstein was
- Q. a great scientist
- R. although he was weak in arithmetic
- S. right from his school

The proper sequence should be:

- A. SRPQ
- B. PQRS
- C. QPSR
- D. RQPS

53. Since the beginning of history

- P. have managed to catch
- Q. the Eskimos and Red Indians
- R. by a heavy difficult method
- S. a few specimens of this aquatic animal

The proper sequence should be:

- A. SRPQ
- B. QPRS
- C. QPSR
- D. RQPS

**Instruction (54 – 55) pick out the most effective word(s) from the given words to fill in the blank to make the sentences meaningfully complete.**

54. The miser gazed ..... at the pile of gold coins in front of him.

- A. avidly
- B. Admiringly
- C. thoughtfully
- D. Earnestly

55. Catching the earlier train will give us the ..... to do some shopping.

- A. chance
- B. Luck
- C. possibility
- D. Occasion

Instruction (56 – 58) each question has an underlined word followed by four answer choices. You will choose the word that is a necessary part of the underlined word.

56. PAIN

- |             |          |
|-------------|----------|
| A. Cut      | B. Death |
| C. Nuisance | D. Hurt  |

57. MONOPOLY

- |              |             |
|--------------|-------------|
| A. Corrupt   | B. Rich     |
| C. Exclusive | D. Gigantic |

58. LIGHTENING

- |                |            |
|----------------|------------|
| A. Electricity | B. Thunder |
| C. Cloud       | D. Rain    |

Instruction (59 – 60) in the following questions, find the CORRECTLY spelt word.

- |                  |             |
|------------------|-------------|
| 59. A. Forign    | B. Foreign  |
| C. Fariegn       | D. Foregn   |
| 60. A. Ommineous | B. Omineous |
| C. Ominous       | D. Omenous  |

61. Write a letter to MHRD for releasing fund for construction work of IIT Jodhpur.

10 Marks

62. Why do you want to serve IIT Jodhpur, justify it by giving reason in 100 words.

10 Marks



**WRITTEN TEST FOR JUNIOR ASSISTANT POSITION**

Name: \_\_\_\_\_

Registration No.: \_\_\_\_\_ Date of Exam: \_\_\_\_\_

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|--|

Signature of the Candidate

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Signature of the Invigilators

**Response Sheet**

**Answers to all questions should be marked as either A or B or C or D.**

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1. Number of Questions Attempted in Words (write in Ink): \_\_\_\_\_
2. Correct answer(s) : \_\_\_\_\_
3. Incorrect answer(s) : \_\_\_\_\_
4. Net score : \_\_\_\_\_

\_\_\_\_\_  
Signature of the Examiner

\_\_\_\_\_  
Signature of the Scrutinizer