

# Indian Institute of Information Technology and Management

## IIITM-K Common Admission Test (ITCAT for MSc programs)

### Sample Questions

Maximum Marks:60

Each question carries 1 mark

#### Section 1 : General Knowledge

1. National Education Day is observed on
  - a. 11th November
  - b. 14th November
  - c. 5th September
  - d. 21st May
  
2. Nobel prize in Physics for the Year 2018 was given for the work on
  - a. Dark matter
  - b. Laser Physics
  - c. Gravitational waves
  - d. Energy saving white light sources
  
3. Which among the following is responsible for the expansion of water in ocean?
  - a. Carbon dioxide
  - b. Nitrogen dioxide
  - c. Carbon monoxide
  - d. Sulphur dioxide
  
4. The International Date Line is approximately equal to
  - a. The equator
  - b. 100th Meridian
  - c. 180th Meridian
  - d. None of these
  
5. Rafael Nadal won the French Open Tennis Title, 2018. He defeated
  - a. Andy Murray
  - b. Roger Federer
  - c. Novak Djokovic
  - d. Dominic Thiem

6. ISRO recently gave clearance for using which frequency band from satellite for Internet on trains?
- C Band
  - KU Band
  - S Band
  - 3G Spectrum
7. Who is the current chairman of the Indian Space Research Organization?
- S.Radhakrishnan
  - G.Satheesh Reddy
  - K.Sivan
  - K.N.Vyas

## Section 2 : General Science

8. LED converts
- Light energy into electrical energy
  - Electrical energy into light energy
  - Thermal energy into light energy
  - Mechanical energy into electrical energy
9. The Celsius temperature is a/an
- Relative temperature
  - Absolute temperature
  - Specific temperature
  - Approximate temperature
10. Which one among the following metals is used in fireworks to make a brilliant white light?
- Sodium
  - Magnesium
  - Aluminium
  - Silver
11. The Coriolis Force is related to
- Meteorology
  - Urban Sprawl
  - Geomorphology
  - Regional Planning

12. Flattening ratio of earth is

- a. 1/360
- b. 1/298
- c. 1/264
- d. 1/180

13. A group of structural and regulating genes that functions as a single unit is called

- a. Operon
- b. DNA
- c. Chromosome
- d. None of these

14. A car travels 90.0 meters due North in 15 seconds. Then the car turns around and travels 40.0 meters due South in 5.0 seconds. What is the magnitude of average velocity of the car during this 20.0 second interval?

- a. 2.5 m/s
- b. 5.0 m/s
- c. 6.5 m/s
- d. 7.0 m/s

15. de-Broglie wavelength of a neutron whose energy

- a.  $0.2 \text{ \AA}$
- b.  $0.1 \text{ \AA}$
- c.  $2.0 \text{ \AA}$
- d. None of these

16. The European Agency for Nuclear Research is

- a. CERN
- b. Euratom
- c. Madam Curie European Research Centre
- d. EANR

### Section3 : Mathematics

17. If 6 is 24% of a number, what is 40% of the same number?
- 8
  - 10
  - 15
  - 20
18. If 7 workers can build 7 cars in 7 days, then how many days would it takes for 5 workers to build 5 cars?
- 1
  - 5
  - 7
  - None of these
19. The next element in the sequence 8, 27, 125, 343... is
- 676
  - 1331
  - 1357
  - 2773
20. Two balls are drawn at random from a bag containing 1 red, 2 white and 3 black balls. The probability that out of two balls drawn one is white and other is black.
- 1/5
  - 2/5
  - 2/6
  - 1/2
21. How many 4 digit numbers can be formed out of 0, 1, 2, 3, 4, 5 so that no digit is repeated in each number?
- 250
  - 300
  - 375
  - 415
22. If  $y = (\log x)^x$  then  $dy/dx$  is
- $X(\log x)^{x-1}$
  - $(\log x)^{x-1} (x/\log x + \log \log x)$
  - $(\log x)^x (x/\log x + \log \log x)$
  - None of these

23. Which of the following cannot be a root of the polynomial  $9x^5 + ax^3 + b$ , where  $a$  and  $b$  are integers.

- a. 9
- b. -9
- c.  $1/3$
- d.  $1/4$

24. If  $8x + 5x + 2x + 4x = 114$ , the  $5x + 3 =$

- a. 12
- b. 25
- c. 33
- d. 47

25. If Sam can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?

- 0.8 days
- 1.09 days
- 1.23 days
- 1.65 days

26.  $\int_{-3}^3 |x+1| dx =$

- a. 0
- b. 5
- c. 10
- d. 15

27. If  $r = 5z$  then  $15z = 3y$ , then  $r =$

- a.  $y$
- b.  $2y$
- c.  $5y$
- d.  $10y$

28. One arch of the sine curve  $y = \sin x$  is revolved around the  $x$ -axis. The volume of the resulting solid is

- a.  $\pi^2$
- b.  $\pi^2/2$
- c.  $2\pi^2$
- d.  $\pi^2/4$

29. A single discount equivalent to discount series 10%, 20% and 30% is

- a. 60%
- b. 50%
- c. 49.6%
- d. 44.6%

30. The ratio of two numbers is 5 : 7 and their H.C.F, is 9. then their L.C.M. is

- a. 35
- b. 315
- c. 63
- d. 81

#### **Section 4 : English and Reasoning**

##### **Order Sentence**

31. 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. RQPS
- b. QSPR
- c. SQPR
- d. PQRS

32. Then

P : it struck me

Q : of course

R : suitable it was

S : how eminently

The Proper sequence should be:

- a. SPQR
- b. QSRP
- c. PSRQ
- d. QPSR

33. Since the beginning of history  
 P : have managed to catch  
 Q : the Eskimos and Red Indians  
 R : by a very difficulty method  
 S : a few specimens of this aquatic animal  
 The Proper sequence should be:
- QRPS
  - SQPR
  - SQRP
  - QPSR

### Spotting errors

34. I should do   the same   if I were in your place.   No error  
 a.                    b.                    c.                    d.
35. He has lost   all what   I gave him.   No error  
 a.                    b.                    c.                    d.

36. Insult : Anger :: ? : ?

- Warning : fine
- Preparedness : war
- Provocation : fight
- Calm : storm

37. Story : episode :: ? : ?

- Book : index
- Poem : stanza
- Movie : climax
- Building : entrance

38. Diva : Opera :: ? : ?

- Producer : theatre
- Director : drama
- Conductor : bus
- Thespian : play

## Synonyms

### 39. CORPULENT

- a. Lean
- b. Gaunt
- c. Emaciated
- d. Obese

### 40. EMBEZZLE

- a. Misappropriate
- b. Balance
- c. Remunerate
- d. Clear

### 41. CANNY

- a. Obstinate
- b. Handsome
- c. Clever
- d. Stout

### 42. VENT

- a. Opening
- b. Stodge
- c. End
- d. Past tense of go

### 43. AUGUST

- a. Common
- b. Ridiculous
- c. Dignified
- d. Petty



**Fill in the blank space by selecting a word**

44. An accomplice is a partner in \_\_\_\_\_
- a. Business
  - b. Crime
  - c. Construction
  - d. Gambling
45. Too many skyscrapers \_\_\_\_\_ the view along the beach.
- a. Reveal
  - b. Obstruct
  - c. Make
  - d. Clear

**Section 4 : Basic Computer science**

46. The binary system uses powers of
- a. 2
  - b. 10
  - c. 8
  - d. 16
47. A computer program that converts assembly language to machine language is
- a. Compiler
  - b. Interpreter
  - c. Assembler
  - d. Comparator
48. The time required for the fetching and execution of one simple machine instruction is
- a. Delay time
  - b. CPU cycle
  - c. Real time
  - d. Seek time
49. The process of reproducing real world events under laboratory conditions is
- a. Simulation
  - b. Prototyping
  - c. Emulation
  - d. SDLC

50. The technique that allows the execution of the programs with size larger than that of physical memory is called \_\_\_\_\_

- a. Virtual memory
- b. Cache memory
- c. Flash memory
- d. Swap memory

51. A person who intentionally accesses a computer or a computer system without authorization to do so, a crime in some situation is a

- a. Intruder
- b. End user
- c. Hacker
- d. Guru

52. A hard disk is divided into tracks which are further subdivided into:

- a. Clusters
- b. Sectors
- c. Vectors
- d. Heads

53. Which access method is used for obtaining a record from a cassette tape?

- a. Direct
- b. Sequential
- c. Random
- d. All of the above

54. The errors that is pointed by the compiler is called

- a. Semantic error
- b. Syntax error
- c. Logical error
- d. Internal error

55. Two main measures for efficiency of an algorithm are

- a. Processor and memory
- b. Complexity and capacity
- c. Time and space
- d. Data and space

56. A single packet on a data link is known as

- a. Path
- b. Frame
- c. Block
- d. Group

57. The 2's compliment of a binary no. is obtained by adding.....to its 1's compliment.

- a. 0
- b. 1
- c. 10
- d. 12

58. ASCII stands for

- a. American standard code for information interchange
- b. All purpose scientific code for information interchange
- c. American security code for information interchange
- d. American Scientific code for information interchange

59. The terms "red book", "yellow book", and "orange book" refer to:

- a. SCSI
- b. ide
- c. floppy drive technology
- d. CD-ROM standards

60. Which output device is used for translating information from a computer into pictorial form on paper

- a. Mouse
- b. Plotter
- c. Touch panel
- d. Card punch