

DO NOT OPEN THIS TEST BOOKLET TILL YOU ARE ASKED TO DO SO.

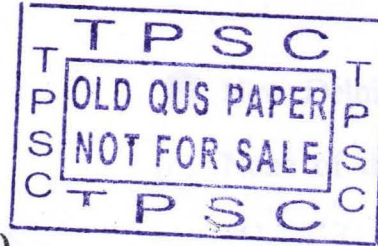
TR/PROG/TPSC/19

**TEST BOOKLET
GENERAL ABILITY TEST**

Test Booklet Series

(Signature of the Candidate)

(Invigilator's Signature)



Time Allowed : 2 hours (Two hours)

Maximum Marks : 400

INSTRUCTIONS

1. PLEASE CHECK THE TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. **ENCODE CLEARLY THE TEST BOOKLET SERIES IN THE APPROPRIATE PLACE IN THE ANSWER SHEET BY BLACK BALL POINT PEN ONLY.**
3. This Test Booklet contains 100 items (questions). Each question, carrying 4 (four) marks only, has four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the most appropriate. In any case, choose **ONLY ONE** response for each item.
4. You have to mark all your responses by Black Ball Point Pen only on the separate Answer Sheet provided. See directions in the Answer Sheet.
5. All items carry equal marks.
6. Before you proceed to mark in the Answer Sheet the responses to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet.
7. After you have completed filling in responses on the Answer Sheet and the Written Examination is completed, you should handover the Answer Sheet to the Invigilator only. You are permitted to take the Test Booklet with you.
8. Sheets for rough work are appended on the Test Booklet at the end.
9. **Penalty for wrong answers :**
 - (a) There will be four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-fourth** of the marks assigned to that question will be deducted as penalty.
 - (b) If a candidate gives more than one answer, it will be treated as a **Wrong Answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
 - (c) If a question is left blank, i.e. no answer is given by the candidate, there will be **no penalty** for that question.

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Four options are given against each of the following questions. Select the best/correct option from among the four options and encode in the answer sheet by using **Black Ball Point Pen** only as per example given below :

Example : The capital of India is

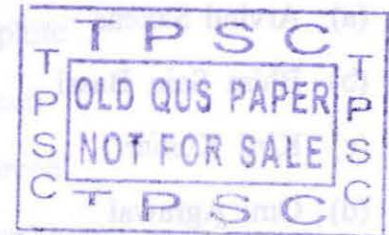
(a) Delhi

☒ New Delhi

(c) Indraprastha

(d) None of these

PART - I



1. Tripura attained full Statehood in

(a) 1967

(b) 1970

(c) 1971

(d) 1972

2. Which State is to the east of Tripura ?

(a) Meghalaya

(b) Sikkim

(c) Mizoram

(d) Arunachal Pradesh

3. Total Number of Assembly Seats in Tripura is

(a) 60

(b) 65

(c) 42

(d) 56

4. Total number of Wildlife Sanctuaries in Tripura is

(a) Two

(b) Three

(c) Four

(d) None of these

5. The ratio of width of our National flag to its length is
 - (a) 3:5
 - (b) 2:3
 - (c) 2:4
 - (d) 3:4
6. Who is the present Chairman of the Union Public Service Commission (UPSC) ?
 - (a) Arvind Saxena
 - (b) Bhim Sain Bassi
 - (c) Kirti Kumar
 - (d) Omi Agrawal
7. Which State has the largest area in India ?
 - (a) Maharashtra
 - (b) Madhya Pradesh
 - (c) Uttar Pradesh
 - (d) Rajasthan
8. Who was awarded Shanti Swarup Bhatnagar (SSB) Prize for Science and Technology 2017 in the domain of Engineering Sciences ?
 - (a) Dr. Deepak Thankappan Nair
 - (b) Dr. Alope Paul
 - (c) Dr. Nissim Kanekar
 - (d) Dr. Sanjeev Das
9. What was the official mascot of the 2018 FIFA World Cup ?
 - (a) Caira
 - (b) Koara
 - (c) Zabivaka
 - (d) Zaltanowa
10. Which is the first country to commence competitive examination in civil services ?
 - (a) China
 - (b) India
 - (c) USA
 - (d) UK
11. The deepest point in the world is
 - (a) Dead Sea
 - (b) South Pole
 - (c) Sinai Peninsula
 - (d) Mariana Trench
12. What is the first artificial satellite to orbit Earth ?
 - (a) Sputnik 1
 - (b) Explorer 1
 - (c) Vanguard 1
 - (d) Discoverer 1

13. Which of the following books is written by Rabindranath Tagore ?

- (a) Anand Math
- (b) Chidambara
- (c) Raktakarabi
- (d) Durgeshnandini

14. Match the following items :

Authors	Books
A. Mahatma Gandhi	1. India Wins Freedom
B. Ram Manohar Lohia	2. India Divided
C. Dr. Rajendra Prasad	3. Hind Swaraj
D. Maulana Azad	4. The Wheel of History

Below the options are given in A B C D order

- (a) 3 4 2 1
- (b) 1 3 4 2
- (c) 4 3 2 1
- (d) 2 3 4 1

15. Who is the author of the book "Flaming Tresses of Draupadi" ?

- (a) Smriti Irani
- (b) Veerappa Moily
- (c) Mallikarjun Kharge
- (d) None of them

16. Which of the books is written by Kapil Dev ?

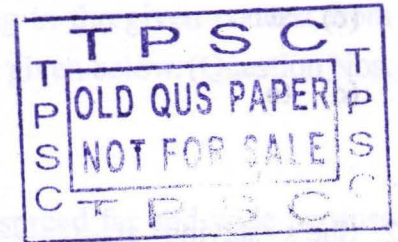
- (a) One day Wonders
- (b) Cricket - My Style
- (c) Twenty Years at the top
- (d) Cricket-Favourite Game

17. Which of the following is used in pencils ?

- (a) Graphite
- (b) Silicon
- (c) Charcoal
- (d) Phosphorous

18. Which of the following blood group is considered as Universal Donor ?

- (a) A
- (b) AB
- (c) B
- (d) O



19. Which of the following allow the electric current to pass through it ?

- (a) Glasses
- (b) Graphite
- (c) Rubber
- (d) PVC

20. The inert gas which is substituted for nitrogen in the air used by deep sea divers for breathing, is

- (a) Argon
- (b) Xenon
- (c) Helium
- (d) Krypton

Select the appropriate article/ preposition to complete the following sentences whenever necessary. (Question Nos. 21-24)

21. Luckily, I made it to the station _____ time to catch the last train.

- (a) in
- (b) for
- (c) at
- (d) to

22. She's staying at _____ hotel in _____ small town in Colorado.

- (a) a ; the
- (b) a ; a
- (c) the ; a
- (d) the ; the

23. He left medicine in between and decided to take _____ music for higher studies as that was his real passion.

- (a) up
- (b) of
- (c) upon
- (d) in

24. Vinay does not play cricket, and _____ does Yashwant.

- (a) so
- (b) also
- (c) either
- (d) neither

Each of the following items consists of a word in capital letters, followed by four words or group of words. Select the word or group of words that is opposite meaning to the word in capital letters. (Question Nos. 25-27)

25. DILAPIDATED

- (a) Costly
- (b) Well-furnished
- (c) Broken-down
- (d) Renovated

26. ZEAL

- (a) Intolerance
- (b) Inefficiency
- (c) Senile
- (d) Apathy

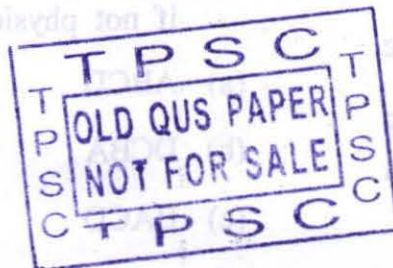
27. BENIGN

- (a) Malevolent
- (b) Friendly
- (c) Unwise
- (d) Soft

Each of the following items consists of a word in capital letters, followed by four words or group of words. Select the word or group of words which express the closest/similar meaning of the given word in capital letters. (Question Nos. 28-30)

28. MASTICATE

- (a) Devour
- (b) Drink
- (c) Chew
- (d) Swallow



29. IMBECILE

- (a) Sane
- (b) Astute
- (c) Foolish
- (d) Aid

30. CANDOR

- (a) Generous
- (b) Falsifier
- (c) Rough
- (d) Truthfulness

In the following question, an idiom or proverb has been underlined. Choose its correct meaning in the given context from the alternatives given below. (Question Nos. 31-32)

31. Her fame spread far and wide because she was a talented singer.

- (a) Her fame grew
- (b) Her fame lessened
- (c) Her fame ended
- (d) Her fame began

32. The old father brought home the moral of unity by asking each of his sons to break the bundle of sticks.

- (a) emphasised
- (b) voiced
- (c) declared
- (d) suggested

Select the option which gives the correct meaning of the given idiom/phrase.
(Question Nos. 33-34)

33. A man of straw

- (a) a worthy fellow
- (b) a man of no substance
- (c) a very active man
- (d) a selfish person

34. To wash one's dirty linen in public

- (a) to do some ugly work in public
- (b) to insult in the presence of others
- (c) to discuss secret matters in public
- (d) to discuss private or embarrassing matters in public, especially when quarreling.

In the question below, there is a sentence with jumbled up parts. Rearrange these parts, which are labelled A, B, C and D to produce the correct sentence. Choose the proper sequence. (Question Nos. 35-36)

35. Rather than refuting ———.

- (A) the claim, the author clearly
- (B) the reader's sympathy
- (C) acknowledges Meredith's inability
- (D) to evoke

- (a) ABCD
- (b) DCAB
- (c) BCAD
- (d) ACDB

36. A man can be physically confined within stone walls.

- (A) But his mind and spirit will still be free.
- (B) Thus his freedom of action may be restricted.
- (C) His hopes and aspiration still remain with him.
- (D) Hence, he will be free spiritually if not physically.

- (a) ABCD
- (b) DCBA
- (c) BACD
- (d) BADC

Read each sentence comprising of (a), (b), (c) and (d) to find out whether there is any grammatical error or idiomatic error in it. Find out the incorrect option from amongst the sentences given below. (Question Nos. 37-40)

37. (a) Having received your letter

(b) this morning, we are writing

(c) to thank you for the same.

(d) No error.

38. (a) I could not put up in a hotel

(b) because the boarding and lodging charges

(c) were exorbitant.

(d) No error.

39. (a) A small baby breathes about

(b) 45 times per minute while

(c) a child of about six years breathes about 25 times per minute.

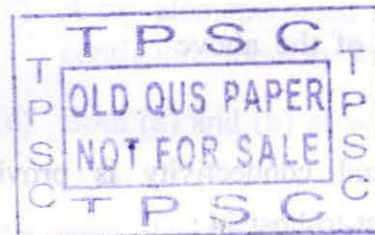
(d) No error.

40. (a) Regretfully, profits earned by your company

(b) fell by 20 per cent last year

(c) despite higher sales.

(d) No error.



PART - II

41. A station in a network forwards incoming packets by placing them on its shortest output queue. What routing algorithm is being used ?
- (a) hot potato routing
 - (b) flooding
 - (c) static routing
 - (d) delta routing
42. To connect a computer with a device in the same room, you might be likely to use
- (a) a dedicated line
 - (b) a ground station
 - (c) a coaxial cable
 - (d) All of the above
43. End-to-end connectivity is provided from host-to-host in :
- (a) Network layer
 - (b) Session layer
 - (c) Data link layer
 - (d) Transport layer
44. _____ is used to optimize the use of the channel capacity available in a network, to minimize the transmission latency and to increase robustness of communication.
- (a) Message switching
 - (b) Linear switching
 - (c) Circuit switching
 - (d) Packet switching
45. An Internet Service Provider (ISP) has the following chunk of Classless Inter-Domain Routing (CIDR)-based IP addresses available with it: 245.248.128.0/20. The ISP wants to give half of this chunk of addresses to Organization A, and a quarter to Organization B, while retaining the remaining with itself. Which of the following is a valid allocation of addresses to A and B ?
- (a) 245.248.136.0/21 and 245.248.128.0/22
 - (b) 245.248.128.0/21 and 245.248.128.0/22
 - (c) 245.248.132.0/22 and 245.248.132.0/21
 - (d) 245.248.136.0/22 and 245.248.132.0/21

46. If data link transmits 4000 frames per second, and each slot has 8 bits, the transmission rate of circuit this Time-division multiplexing (TDM) is

- (a) 32 Kbps
- (b) 500 bps
- (c) 500 Kbps
- (d) None of the mentioned above

47. What is the output of the following program ?

```
#include <stdio.h>

main()
{
    printf(stdout, "Hello, World!");
}
```

- (a) Hello, World!
- (b) No output
- (c) Compile error
- (d) Runtime error

48. C programs are converted into machine language with the help of

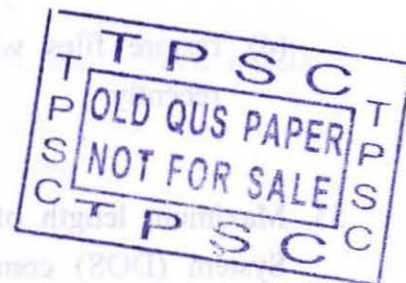
- (a) an editor
- (b) a compiler
- (c) an operating system
- (d) None of the above

49. What will be the size of the following structure ?

```
#include <stdio.h>

struct temp
{
    int a(10);
    char p;
};
```

- (a) 5
- (b) 11
- (c) 41
- (d) 44



50. Choose the correct statement :

- (a) Strictly speaking C supports one-dimensional arrays only.
- (b) An array element may be an array by itself.
- (c) Array elements need not occupy contiguous memory locations.
- (d) Both (a) and (b) above

51. An array elements are always stored in _____ memory locations.

- (a) sequential
- (b) random
- (c) sequential and random
- (d) None of the above.

52. In Microsoft Disk Operating System (MS-DOS), RESTORE command is used to

- (a) restore files from disks made using the BACKUP command
- (b) restore files which are deleted
- (c) restore files from recycle bin
- (d) restore files which are deleted recently

53. Maximum length of Disk Operating System (DOS) command using any optional parameter is

- (a) 26 characters
- (b) 87 characters
- (c) 127 characters
- (d) None of the above

54. The deleted file in Microsoft Disk Operating System (MS-DOS) can be recovered immediately, if you use the command mention below, the command is

- (a) DO NOT DELETE
- (b) NO DELETE
- (c) UNDELETE
- (d) ONDELETE

55. In Hypertext Markup Language (HTML), a/an _____ is essentially a macro that allows a short name to be associated with replacement text.

- (a) Entity
- (b) Attribute
- (c) Comment
- (d) None of the mentioned above

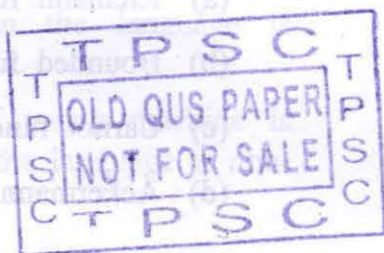
56. Choose the correct statement of Hypertext Markup Language (HTML) :

- (a) In traditional XHTML close tag for some elements is optional but not encouraged.
- (b) In traditional HTML close tag for some elements is optional but not encouraged.
- (c) None of the mentioned.
- (d) In both traditional XHTML and HTML close tag for some elements is optional.

57. Which of the following element is removed by HTML5 ?

- (a) vlink
- (b) dir
- (c) marginwidth
- (d) compact

58. What is the correct HTML for creating a hyperlink ?
- `A`
 - `<a>B`
 - ` example `
 - ` example`
59. HTML markup language is a set of Markup _____.
- Sets
 - Tags
 - Attributes
 - Groups
60. In Cascading Style Sheets (CSS), which of the following selector selects the elements that are checked ?
- `E ~ F`
 - `::after`
 - `:checked`
 - None of the mentioned above
61. In HTML, which of the following is the attribute that is used to add a name/value pair to a microdata item ?
- item scope
 - itemref
 - itemprop
 - itemid
62. The graph that shows basic blocks and their successor relationship is called
- DAG
 - Flow graph
 - Control graph
 - Hamiltonion graph
63. The number of tokens in the following C statement is
- ```
printf("i = %d, &i = %x", i, &i);
```
- 3
  - 26
  - 10
  - 21
64. The lexical analysis for a modern computer language such as Java needs the power of which one of the following machine models in a necessary and sufficient sense ?
- Finite state automata
  - Deterministic pushdown automata
  - Non-deterministic pushdown automata
  - Turing Machine
65. When a computer is first turned on or restarted, a special type of absolute loader is executed called
- Compile and GO loader
  - Boot loader
  - Boot strap loader
  - Relating loader





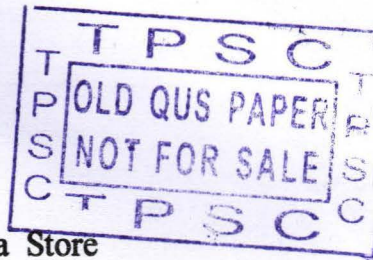
66. The languages that need heap allocation in the runtime environment are
- (a) those that use global variables
  - (b) those that use dynamic scoping
  - (c) those that support recursion
  - (d) those that allow dynamic data structure
67. In a compiler, the data structure responsible for the management of information about variables and their attributes is
- (a) Semantic stack
  - (b) Parser table
  - (c) Symbol table
  - (d) Abstract syntax-tree
68. Consider a program that reads 500 integers in the range of  $[0, 100]$  that represents the score of 500 students. Frequency of each score above 50 is then printed. For the program to store the frequencies the best way is
- (a) a dynamically allocated array of 550 numbers
  - (b) an array of 100 numbers
  - (c) an array of 500 numbers
  - (d) an array of 50 numbers
69. Assuming that the height of a tree with a single node is 0, the maximum height of any AVL-tree with 7 nodes is
- (a) 5
  - (b) 4
  - (c) 3
  - (d) 2
70. Language of finite automata is
- (a) Type 0
  - (b) Type 1
  - (c) Type 2
  - (d) Type 3
71. The word 'formal' in formal languages means
- (a) they are unnecessary, in reality
  - (b) the symbols used have well-defined meaning
  - (c) only the form of the string of symbols is significant
  - (d) None of the above
72. Which of the following is not primitive recursive, but partially recursive ?
- (a) Ricmann function
  - (b) Bounded function
  - (c) Carnot function
  - (d) Ackermann function

73. Which among the following is not notated as infinite language ?
- Palindrome
  - Reverse
  - Factorial
  - $L=\{ab\}^*$
74. Number of states require to accept string ends with 10 is
- 3
  - 2
  - 1
  - can't be represented
75. Grammatical rules which do not involve the meaning of words are called \_\_\_\_\_.
- Semantics
  - Syntactic
  - Both (a) and (b)
  - None of the given above
76. Which statement is true ?
- The tape of turing machine is infinite.
  - The tape of turing machine is finite.
  - The tape of turing machine is infinite when the language is regular.
  - The tape of turing machine is finite when the language is non-regular.
77. Which of the following pairs of regular expressions are equivalent ?
- $1(01)^*$  and  $(10)^*1$
  - $x(xx)^*$  and  $(xx)^*x$
  - $x^+$  and  $x^+x^{**}$
  - All of the above
78. Dynamic errors can be detected at
- compile time
  - runtime
  - Both (a) and (b) above
  - None of the above
79. For which of the following applications regular expressions can be used ?
- Designing compilers
  - Developing text editors
  - Simulating sequential circuits
  - All of the above
80. In multilevel feedback scheduling algorithm
- a process can move to a different classified ready queue
  - classification of ready queue is permanent
  - processes are not classified into groups
  - None of the mentioned above



81. Which process can be affected by other processes executing in the system ?
- (a) cooperating process
  - (b) child process
  - (c) parent process
  - (d) init process
82. The signal operation of the semaphore basically works on the basic \_\_\_\_\_ system call.
- (a) continue()
  - (b) wakeup()
  - (c) getup()
  - (d) start()
83. In analyzing the compilation of PL/I (Programming Language One) program, the term "Lexical analysis" is associated with
- (a) recognition of basic syntactic constructs through reductions
  - (b) recognition of basic elements and creation of uniform symbols
  - (c) creation of more optional matrix
  - (d) use of macro processor to produce more optimal assembly code
84. Memory management is
- (a) not used in modern operating system
  - (b) replaced with virtual memory on current systems
  - (c) not used on multiprogramming systems
  - (d) critical for even the simplest operating systems
85. A computer system has 6 tape drives, with 'n' processes competing for them. Each process may need 3 drives. The maximum value of 'n' for which the system is guaranteed to be deadlock free is
- (a) 1
  - (b) 2
  - (c) 3
  - (d) 4
86. In the Zero capacity queue
- (a) the queue can store at least one message
  - (b) the sender blocks until the receiver receives the message
  - (c) the sender keeps sending and the messages don't wait in the queue
  - (d) None of the mentioned above
87. Real time streaming protocol is used
- (a) to control streaming media servers
  - (b) for establishing and controlling media sessions between endpoints
  - (c) to provide real time control of playback of media files from the server
  - (d) All of the mentioned above

88. For a weak entity set to be meaningful, it must be associated with another entity set, called the
- Identifying set
  - Owner set
  - Neighbour set
  - Strong entity set
89. The relational model feature is that there
- is no need for primary key data
  - is much more data independence than some other database models
  - are explicit relationships among records
  - are tables with many dimensions
90. Consider the join of a relation R with relation S. If R has m tuples and S has n tuples, then the maximum size of join is
- mn
  - m+n
  - $(m+n)/2$
  - $2(m+n)$
91. A subset of data in a data warehouse in the form of summary data, related to a particular department or business function :
- Meta data
  - Archive data
  - Data Marts
  - Operational Data Store
92. Boehm suggests an approach that addresses project objectives, milestones and schedules, responsibilities, management and technical approaches and required resources. This principle is called as \_\_\_\_.
- W3HH principle
  - WHO principle
  - W5HH principle
  - None of the above
93. Alpha and Beta Testing are forms of \_\_\_\_.
- Acceptance testing
  - Integration testing
  - System testing
  - Unit testing
94. Which of the following requires design control measures, such as holding and recording design reviews and qualification tests ?
- CMM
  - ISO 9001
  - ISO 9000-3
  - None of the mentioned above





95. Which diagram in Unified Modeling Language (UML) shows a complete or partial view of the structure of a modeled system at a specific time ?
- (a) Sequence Diagram
  - (b) Collaboration Diagram
  - (c) Class Diagram
  - (d) Object Diagram
96. A decade counter skips \_\_\_\_.
- (a) binary states 1000 to 1111
  - (b) binary states 0000 to 0011
  - (c) binary states 1010 to 1111
  - (d) binary states 1111 to higher
97. The access time of a word in 4 MB main memory is 100 ms. The access time of a word in a 32 kb data cache memory is 10 ns. The average data cache hit ratio is 0.95. The efficiency of memory access time is
- (a) 9.5 ns
  - (b) 14.5 ns
  - (c) 20 ns
  - (d) 95 ns
98. What is the typical invalid voltage for a binary signal ?
- (a) 0.7–2.8 volts
  - (b) 0.8–3 volts
  - (c) 0.8–2 volts
  - (d) 0.7–2.5 volts
99. What type of register would have a complete binary number shifted in one bit at a time and have all the stored bits shifted out one at a time ?
- (a) parallel-in, parallel-out
  - (b) parallel-in, serial-out
  - (c) serial-in, parallel-out
  - (d) serial-in, serial-out
100. The American Standard Code for Information Interchange (ASCII) uses how many individual pulses for any given character ?
- (a) 1
  - (b) 2
  - (c) 7
  - (d) 8