

## TNUSRB SI Technical – Model Question Paper 3

- Find out the correct statement  
I) Free Hotels called 'Aathular salai' were setup at Thanjavur and many more places.  
II) Rajaraja – I Conquered Maldives  
A) I **B) II**  
C) I, II D) None of these
- The chola empire reached its Zenith under  
a)Parantaka I b)Rajendra chola II  
c)Rajaraja **d)RajendraChola I**
- The Union parliament and state Legislature have the powers to make laws in respect of  
a)State List b)Union List  
**c)Concurrent List** d)None
- Which of the following was the lowest unit of Chola administration?  
a)Mandalam b)Valanadu  
c)Kottam **d)Kurram**
- George Johnstone stoney contribution to research in this area laid the foundations for the eventual discovey of particles by  
(A) Faraday (B) Dalton  
**(C) J.J. Thomson** (D) Goldstein
- Who among the following rulers belonged to pallavas of Prakrit charter?  
**a)Virakurchavarma** b)Nandivarma  
c)Mahendravarma d)Narasimhavarma
- During whose period Kanchi came under the control of Pallavas?  
a)Vishnugopa  
b)Vijayalaya  
c)Krishna II  
**d)Sivaskandarvarma**
- Which is used as a fuel in cooking food  
**(A) coal gas** (B) liquor ammonia  
(C) coal tar (D) coke
- Which of the following kingdoms of south India was known for its naval power?  
a)Hoysala b)Pandya  
**c)Chola** d)Chalukya
- The new element of Gopuram was encouraged in temples of South India by  
a)Cholas b)Chalukyasa  
c)Pallavas **d)Pandyas**
- Living chemistry is  
**a) Carbon chemistry**  
b) Hydrogen chemistry  
c) Organic chemistry  
d) Inorganic chemistry
- Mahendravarman I is titled as  
**a)Chittirakkarapuli** b)Parantaka –I  
c)Uttama Chola d)Muttaraiyar
- Mattavilasa Prahasanam is composed by  
a)Narasimhavarma II  
**b)Mahendravarman I**  
c)Pulakesin II  
d)Vishnugupta
- Who was not a successors of parantaka – I  
A) Gadaraditya B) Arinjaya  
C) Uttama Chold **D) Karikala chola**
- Find out the correct statement about Mahen dravarman I  
I) Saint Appar embraced Jainism due to Mahandravarma – I's influence  
II) He constructed the cities to Mahendramanagalam and Mahendravadi.  
A) I **B) II**  
C) I, II D) None of these
- During the period of Pandiya's, the village administration was looked after by  
**a)5 variyams** b)6 variyams  
c)Army chiefs d)Nanaya variyam

17. Bharathanatiam was developed during the period of  
**a)Chola's**                                        b)Pandiya's  
c)Chera's                                         d)Govinda –II
18. A state Human Rights Commission submits its annual report to the  
a)State Legislature  
b)Governor of the State  
**c)State Government**  
d)Parliament of India
19. Which article of the Indian Constitution ensure equality before law?  
a)Article 13                                        b)Article 12  
**c)Article 14**                                        d)Article 20
20. who was very popular in Rajasthan for bhajans  
A) Ramanuja                                        B) Basava  
C) chaitanya                                        **D) Mirabai**
21. The right to Constitutional remedies is available to citizens of India uner the Article  
a)17     b)19  
c)30     **d)32**
22. How many members can be nominated by the President of India to the Lok Sabha  
**a)2**    b)10  
c)12     d)None
23. Where is India's 13<sup>th</sup> Oil Refinery setup?  
**a)Narimanam**                                     b)Kalpakkam  
c)Trivandrum                                     d)Srinagar
24. The introduction of no confidence motion in the Lok Sabha requires the support of  
**a)50 members**                                     b)60 members  
c)70 members                                     d)80 members
25. The union council minister is the  
**a)Real executive of the country**  
b)Nominal executive of the country  
c)Neither Nominal nor real executive of the country  
d)None
26. What is the important function of Parliament?  
a)Governing  
**b)Law making**  
c)Collecting taxes  
d)Criticising Government
27. When a student weighing 45 kgs left a class, the average weight of the remaining 59 students increased by 200g.what is the average weight of the remaining 59 students  
A) 55     B) 56  
**C) 57**     D) 58
28. In a parliament system, the executive is responsible to  
**a)The legislature**                                 b)The Judiciary  
c)The people                                         d)None of these
29. How many seats are reserved for Union Territories in the Lok Saba?  
a)10 Seats     b)15 seats  
**c)13 seats**     d)30 Seats
30. How long can a person remain a Minister in India without being Parliament?  
a)3 months     **b)6 months**  
c)9 months     d)1 year
31. Which party came to power in the year 1967 in Tamil Nadu?  
a)Anna Dravidian Munnetra Kazhagam  
**b)Dravida Munnetra Kazhagam**  
c)Communist party of India  
d)Indian National Congress
32. The Founder of the Dravida Kazhagam was?  
a)VOC     b)Subramaniam  
c)Annadurai     **d)E.V.R.Periyar**
33. The first Tamil Nadu Chief Minister to be awarded Bharat Ratna is  
a)c.N. Anna durai  
b)M.G.Ramachandran  
**c)C.Rajagopalachari**  
d)Baktavatchalam

34. Who introduced the Kulakalvi thitam in tamilnadu?  
a) **Rajaji** b) Ramasamy  
c) Kamaraj d) Jeyalalitha
35. The Political Mentor of Kamaraj is?  
a) c.N. Anna durai b) Ramasamy  
d) Baktavatchalam **d) S. Satyamoorthi**
36. Velocity of light  
a)  **$3 \times 10^8$  m/s** b)  $3 \times 10^8$  m/s<sup>2</sup>  
c) 340 m/s d) 340 m/s<sup>2</sup>
37. Audible range of sound for Dolphins (in Hz)  
a) 1000-100000 b) 1000-150000  
**c) 70-150000** d) 900-200000
38. A sound wave whose frequency is 220 Hz has a speed of 440 m/s in a given medium. Find the wave length of sound.  
a) 1 m **b) 2m**  
c) 3m d) 4m
39. Who was invented the hydrometer?  
a) Watt b) Joule  
c) Kelvin **d) Charles**
40. Who pointed out that from chemical reactions come electricity; from electricity comes magnetism; we can obtain electricity, from electricity we can go back to chemical reactions.  
**a) Faraday** b) watt  
c) Joule d) Boyle
41. Oral Polio vaccine was invented by?  
a) Pasteur b) Jenner  
**c) Sabin** d) Ross
42. The material which is used to make permanent magnet is  
a) Soft iron **b) Steel**  
c) Brass d) Bronze
43. Electric Bulbs are filled with the gas?  
a) Oxygen b) Carbon di-oxide  
**c) Argon** d) Nitrogen
44. Which is the fastest spreading disease?  
**a) Malaria** b) Plague  
c) Polio d) Leprosy
45. The basic characteristic of an underdeveloped economy is  
**a) Low income and poverty**  
b) Low productivity  
c) Low per capital income  
d) High illiteracy level
46. According to 2001 census the state having highest urban population is  
**a) Maharashtra** b) Tamil Nadu  
c) Kerala d) Delhi
47. Name the Newspaper started by Annie Besant?  
a) Young India **b) New India**  
c) India d) Sudesi
48. India for Indians was propagated by  
a) Motilal Nehru  
**b) Swami Dayananda Sarasawathi**  
c) Madhan Mohan Malaviya  
d) Mahatma Gandhi
49. Who has been appointed as global ambassador of the World Packaging Organisation (WPO)?  
A) Raguchandran  
B) Ramachandran  
**C) Chakravarthi**  
D) Ragubeer Chandran
50. Which of the following country to relax visa regime for Indians from January 2018?  
**A) Japan** B) Australia  
C) Sweden D) Norway
51. Who won the Brazilian grand prix?  
A) Daniel Ricardo  
**B) Sebastian Vettel**  
C) Lewis Hamilton  
D) Max Verstappen
52. Budhi Gandaki hydro power project is in?  
A) Srilanka B) Bangaladesh  
**C) Nepal** D) Myanmar

53. Which of the following bank has launched an instant international payment service using ripple net?  
 A) **Axis bank**                      B) ICICI bank  
 C) HDFC bank                      D) HDFC bank
54. International day for the elimination of violence against women is observed on ?  
 A) November 24                      B) **November 25**  
 C) November 26                      D) November 27
55. International Geological Congress (IGC) in 2020 will be held in which city?  
 A) Mumbai                      B) Pune  
 C) Nagpur                      D) **Newdelhi**
56. Who has been appointed as chairman of 15<sup>th</sup> finance commission?  
 A) Sharath Kamal                      B) Lakhman  
 C) **G.Sathiyar**                      D) Sai Praneeth
57. Bajrang punia and vinoid kumar bags silver U23 world wrestling championship held in?  
 A) Argentina                      B) Spain  
 C) Thailand                      D) **Poland**
58. Which of the following APP has been launched for farmers by Manohar Parrikar  
 A) Krishi unathi APP  
 B) Krishi Karman APP  
 C) **Jai Kisaan APP**  
 D) Jain krishi APP
59. The sap – sucking insects can be controlled by  
 I) Malathion                      II) Dimethoate  
 III) Lindane                      IV) Metasystox  
 a) I, II                      b) II, III  
 c) I, III                      d) **II, IV**
60. The hardest part of the human body is  
 a) Bone                      b) Tissue  
 c) Nail                      d) **Tooth**
- PART B**
61. When higher power ICs are needed, we can use  
 A. Monolithic ICs  
 B. Thin film ICs  
 C. Thick film ICs  
 D. **Both b and c**
62. The package suffix code for ceramic dual-in-line is  
 A. **J**                      B. D  
 C. N                      D. P
63. A device that contains its own transistors, resistors and diodes  
 A. **Integrated circuit**  
 B. CMOS  
 C. Logic gates  
 D. All of these
64. The absolute maximum rating for op-amps interval power dissipation is  
 A. **500 Mw**                      B. 300 mW  
 C. 200 mW                      D. 100 mW
65. What is the principal method used in the fabrication of semiconductor devices for hybrid and monolithic ICs?  
 A. Epitaxial growth  
 B. Photolithographic process  
 C. Isolation diffusion  
 D. **Planar technology**
66. The typical dimension of a diode in a single IC chip is  
 A. 4 mils x 6.5 mils                      B. 2 mils x 12 mils  
 C. **3 mils x 4.5 mils**                      D. 1.5 mils x 3 mils
67. If the base 10 is called decimal number system, then the base 12 is called  
 A. Bidecimal number system  
 B. Dodecimal number system  
 C. **Duodecimal number system**  
 D. All of these
68. CMRR means  
 A. Common-mode rejection ratio  
 B. The ratio of the differential voltage gain to common-mode voltage gain

- C. Both a and b**  
D. The difference between the two base voltages
69. The unwanted capacitance between connecting wires and ground.  
A. Summer capacitor  
**B. Stray wiring capacitance**  
C. Biasing capacitance  
D. Feedback capacitance
70. In IC op-amps, the input bias current is defined as the  
**A. Average of the two base currents**  
B. Total of the base currents  
C. Inverse of the base currents  
D. Difference of the base currents
71. The maximum rate that an output voltage of an op-amp can change  
**A. Slew rate**  
B. CMRR  
C. Input offset voltage  
D. Tail current
72. . To use a comparator for zero-level detection, the inverting input is connected to  
**A. Ground**  
B. A positive reference voltage  
C. The dc supply voltage  
D. A negative reference voltage
73. Microwave ICs cover the frequency range from  
**A. 0.5 to 15 GHz**                      B. 15 to 30 GHz  
C. 30 to 45 GHz                      D. 45 to 100 GHz
74. An oscillator is described by  
A. Regenerative feedback  
B. No feedback  
C. An integrator or differentiator  
**D. Unity gain and zero phase shift around the feedback loop**
75. To convert a summing amplifier of an averaging amplifier  
A. All inputs must be of the same value  
**B. The ratio of  $R_f/R$  must equal to the reciprocal of the number of inputs**  
C. All input resistors must be of different value  
D. The ratio of  $R_f/R$  must equal to the number of inputs
76. In most modern IC op-amps, the 741 requires \_\_\_\_\_ power supplies  
A.1    **B. 2**  
C. 3    D. 4
77. . A technique used to eliminate the need for inductive elements in monolithic integrated circuits.  
A. Projection printing  
B. Photolithographic  
C. LC synthesis  
**D. RC synthesis**
78. A stable multivibrator is  
**A. A square wave clock**  
B. Equivalent to a flip-flop  
C. A one-shot multivibrator  
D. Mono stable in nature
79. The \_\_\_\_\_ of an op amp is its voltage gain when there is no negative feedback  
A. CMRR                                      B. Unity gain  
C. Close-loop                                **D. Open-loop**
80. An integrated circuit for both astable and monostable applications  
A. 741 op-amp                                B. Discrete ICs  
C. Monolithic ICs                            **D. 555 timer**
81. Most linear ICs are low-power devices with power dissipation ratings of  
A. 5 W    B. 1  $\mu$ W  
**C. Less than 1 W**                            **D)None**
82. One of the disadvantages of PCM is  
**a. It requires large bandwidth**  
b. Very high noise  
c. Cannot be decoded easily  
d. All of the above
83. In Delta Modulation, the bit rate is



- d)power density
98. If an observation point is closely located to the source, then the field is termed as\_\_\_\_  
**a)Induced**                                b)Radiated  
 c)Reflected                                d)Far-Field
99. On which factor/s do/does the radiation field of a small loop depend?  
 a)Shape                                        **b)Area**  
 c)Both a and b                                d)None of the above
100. What is the nature of radiation pattern of an isotropic antenna?  
**a)Spherical**                                b)Dough-nut  
 c)Elliptical                                    d)Hyperbolic
101. Which mode of propagation is adopted in HF antennas?  
**a)Ionospheres**                                b)Ground wave  
 c)Troposphere                                d)All of the above
102. Which among the following exhibits perpendicular nature in TEM wave?  
 a)Electric field  
 b)Magnetic Field  
 c)Direction of propagation  
**d)All of the above**
103. In an electrical circuit, which nature of impedance causes the current & voltages in phase?  
 a)Reactive                                    **b)Resistive**  
 c)Capacitive                                    d)Inductive
104. Which antennas are renowned as patch antennas especially adopted for space craft applications?  
 a)Aperture                                    **b)Microstrip**  
 c)Array    d)Lens
105. Sterdian is a measurement unit of\_\_\_\_  
 a)Point angle                                b)linear angle  
 c)Plane angle                                **d)Solid angle**
106. Dipole antenna is symmetrical in nature where the two ends are at equal potentials with respect to \_\_\_\_point  
 a)Initial                                        b)Eventual  
 c)Mid    d)None
107. For receiving a particular frequency signal, which tuning component must be used by loop to form a resonant circuit for tuning to that frequency?  
**a)Capacitor**                                b)Inductor  
 c)Resistor                                        d)Gyrator
108. If the elements of a binomial array are separated by  $\lambda/4$ , how many shape patterns are generated with no minor lobes?  
 a)2    b)4  
**c)8**    d)16
109. Which angle of rhombic antenna represents one half of included angle of two legs of one wire?  
 a)Apex angle                                **b)Tilt angle**  
 c)Both a and b                                d)None of the above
110. Why are beverages antennas not used as transmitting antenna?  
 a)Low radiation resistance  
 b)Low radiation efficiency  
**c)Both a and b**  
 d)None
111. For avoiding ground losses, better is the surface conductivity, less is the \_\_\_\_  
**a)Attenuation**  
 b)Phase velocity  
 c)Propagation constant  
 d)Tilt angle
112. Which layer has the atmospheric conditions exactly opposite to that of standard atmosphere?  
 a)Depression layer                                b)Regression layer  
**c)Inversion layer**                                d)Invasion layer
113. Example of automatic programmable machine is  
 a)ATM    **b)ROBOT**  
 c)CAD    d)CAM
114. Piggybacking protocol is a technique used for  
 a)ACK's                                        b)NAK's  
**c)Both a and b**                                d)None

115. Checksum is used in Internet by several protocols although not at the  
 a) Session layer                      b) Transport layer  
 c) Network layer                      d) **Data link layer**
116. Cryptanalysis is used  
 a) **to find insecurity in an cryptographic scheme**  
 b) To increase the speed  
 c) To encrypt the data  
 d) None
117. Cryptographic hash function takes an arbitrary block of data and returns  
 a) **Fixed size bit string**  
 b) Variable size bit string  
 c) Both fixed size bit string and variable size bit string  
 d) None of the mentioned
118. Message authentication is a service beyond  
 a) Message Confidentiality  
 b) **Message Integrity**  
 c) Message Splashing  
 d) Message Sending
119. A hash function guarantees integrity of a message. It guarantees that message has not be  
 a) Replaced                      b) Over view  
 c) **Changed**                      d) Violated
120. Digest created by a hash function is normally called a  
 a) **modification detection code(MDC)**  
 b) Modify Authentication connection  
 c) Message authentication Control  
 d) Message authentication cipher
121. Class B amplifier is biased ?  
 a) At midpoint of load line  
 b) **Just at cut - off**  
 c) Nearly twice cut - off  
 d) None of the above
122. How will electrons flow through a p – channel JFET ?  
 a) From source to drain  
 b) From source to gate  
 c) From drain to gate  
 d) **From drain to source**
123. The theoretical efficiency of class D amplifier is  
 a) 75 %                      b) 85 %  
 c) 90 %                      d) **100 %**
124. What common factor determines the voltage gain and input resistance of a common gate amplifier ?  
 a) RD                      b) RL  
 c) **gm**                      d) All of these
125. The E – MOSFET is quite popular in \_\_\_\_\_ application  
 a) Digital circuitry                      b) High frequency  
 c) Buffering                      d) **All of above**
126. A JFET has disadvantage of  
 a) Being noisy  
 b) **Having small gain – bandwidth product**  
 c) Possessing positive temperature coefficient  
 d) Having low input impedance
127. The gate controls  
 a) The width of the channel  
 b) The drain current  
 c) The gate voltage  
 d) **All of them**
128. The input signal for an instrumentation amplifier usually comes from  
 a) An inverting amplifier  
 b) A resistor  
 c) A differential amplifier  
 d) **A wheatstone bridge**
129. A tunnel – diode is best suited for  
 a) Very low frequencies  
 b) 50 Hz  
 c) 100 kHz  
 d) **Microwave frequencies**



130. Which oscillators are easy to fabricate in a monolithic IC ?  
a) Crystal oscillator  
b) Hartley oscillator  
c) Wien bridge oscillator  
**d) Relaxation oscillator**
131. Each RC circuit causes the gain to drop at a rate of \_\_\_\_\_ dB/decade  
a) **20**  
b) 10  
c) 6  
d) 8
132. What terms means that the midrange voltage gain is assigned a value of 1 or 0 dB ?  
a) Critical  
b) Miller  
**c) Normalized**  
d) Corner
133. The output of a Schmitt trigger is a  
**a) Pulse waveform**  
b) Sawtooth waveform  
c) Sinusoidal waveform  
d) Triangle waveform
134. A log amplifier has \_\_\_\_\_ in the feedback loop  
a) A diode  
b) a BJT  
c) A resistor  
**d) Either a diode or a BJT**
135. The latest efficient amplifier among all classes is  
a) Class B  
b) Class BA  
**c) Class A**  
d) Class C
136. In audio and video compression, each frame is divided in to small grids, called picture elements or  
a) Frame  
b) Packets  
**c) Pixels**  
d) mega pixels
137. Streaming stored audio/video, files are compressed and stored on a  
a) IP  
b) **Server**  
c) Domain  
d) Internet
138. Which of the following was the IBM Token bus?  
a) IEEE 802.10  
b) IEEE 802.11  
c) IEEE 802.1  
**d) IEEE 802.4**
139. A device that helps prevent congestion and data collisions  
**a) Switch**  
b) Hub  
c) Gate way  
d) Proxy server
140. A device that is used to connect a number of LAN's is  
**a) Router**  
b) Repeater  
c) Bridge  
d) Switch
141. Which among the following represents the flawless hand off with no perceivable interruption of service?  
a) Hard hand off  
**b) Soft hand off**  
c) Intracell hand off  
d) Intercell hand off
142. A typical memory hierarchy starts with a small, expensive and relatively fast module called the  
**1) cache**  
2) main memory  
3) system  
4) information
143. Address of Operand is in a register whose value is incremented after fetching the operand  
1) Increment Mode  
2) Decrement Mode  
**3) Auto Increment Mode**  
4) Auto Decrement Mode
144. Converting the symbolic representation into machine language is performed by a special  
1) Linker  
2) Loader  
**3) Assembler**  
4) Interpreter
145. Memory unit is made up of.....  
**1) 4096**  
2) 6904  
3) 6905  
4) 4097

146. A table which is generated by the first pass which includes all symbols and binary values which is known as table  
1) Information                      2) **Symbol**  
3) Instruction                      4) Code
147. The opcode field contains .....abbreviation of a given operation  
1) Mnemonic                      2) **Symbolic**  
3) Coded                              4) Constant
148. Data movement instructions in X<sub>86</sub> family include mainly..... subtype  
1) **4**                                      2) 3  
3) 5                                      4) 6
149. Interactions with operating systems can take place in the form of a code that causes the execution of a function called  
1) calling function                      2) **system calls**  
3) call by value                      4) call by reference
150. Single precision format consists of bits....  
1) 16                                      2) 64  
3) **32**                                      4) 8
151. The address of the operand is obtained by adding a constant to the content of a register called.....  
1) **Index Register**  
2) Segment Pointer  
3) Stack Pointer  
4) Index Word register
152. Which is not a component of CPU  
1) Register Set  
2) Arithmetic and Logic Unit  
3) Control Unit
- 4) Processing Unit**
153. Which specifies the type of the data that will be contained in the array  
1) size                                      2) data  
3) **data type**                              4) data value
154. List of values must be separated by  
1) colon                                      2) brackets  
3) **commas**                                      4) semicolon
155. To compare two strings  
1) **streq** ( )                                      2) cmp ( )  
3) string ( )                                      4) strcat ( )
156. Unary operator can also be called as  
1) Indirect Operator  
2) Dereferencing Operator  
3) **Both (1) & (2)**  
4) Uniary Operator
157. ....break large computing task into smaller ones  
1) **Functions**                                      2) Pointer  
3) Array                                      4) Structure
158. A 'C' function may return a value to its caller using a statement  
1) **return**                                      2) void  
3) call                                      4) return value
159. A variable name should not be more than .....characters  
1) 30                                      2) **31**  
3) 28                                      4) 32
160. String can be continued by putting.....at the end of the line  
1) **back slash (\)**                                      2) Front slash (/)  
3) comma(,)                                      4) '\\'

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