I. Telecom Cable

S.No.	Question	Answer
1.	The cable should be laid in _____ pipes on either side of a Traction Sub-station a) GI pipe b) RCC pipe c) PVC pipe d) none of the three	**(b)**
2.	Permissible psophemetric voltage in RE cable is not more than ____ a) 1mV b) 3mV c)1.5mV d)2 mV	**(d)**
3.	Transmission loss of Copper wire 0.9mm dia (unloaded) a) 0.56 dB/Km c) 0.63 dB/Km b) 0.25 dB/Km d) None/Km	**(c)**
4.	Codal life of 6 quad cables a) 5 years b) 6 years c) 10 years d)20 years	**(d)**
5.	Loop resistance of 6 quad cable a) 65 Ω/Km b) 56 Ω/Km c) 20 Ω/Km d)None	**(b)**
6.	Cable Markers are provided at every _____ meters a) 40 b) 100 c)50 d)60	**(c)**
7.	Emergency control runs over which quad no. a) 4 b)1 c)3 d)2	**(c)**
8.	Fiber loss/km at 1550 nanometer is _____ a)0.4 dB/km b)0.35dB/km c)1.5dB/km d)0.25dB/km	**(d)**
9.	The primary purpose of Aluminium screen in 6 Quad cable is to provide – (A) mechanical protection (B) reduction in induced voltages (C) protection from rats (D) protection from acidic soil	**(b)**
10.	Characteristic impedance of PIJF pair cable is a) 600 ohms B) 1120 ohms C) 470 ohms D) 56 ohms	**(a)**
11.	Screening in underground cables is done to reduce a) Noise b) cross talk c) TX loss d) induced voltage	**(d)**
12.	Supply voltage required for CCEO system is a)48V b)24V c)12V d)-48V	**(d)**
13.	Maximum no. of control telephones a MTWE can have a)4 b)5 c)10 d)6	**(a)**
14.	Loss in case of fusion splicing should be less than _____dB. a) 0.1 dB b) 5 dB c) 1 dB d) 0.5 dB	**(a)**
15.	Twisting of cables is done for _____ in cables a) Balancing b) reducing Interference c) reducing cross talk d) earthing	**(c)**

Earthing & Surge Protection

1.	Railway telecom earth should have a value of – a) Less than 10 ohms c) Less than 2 ohms b) Less than 1 ohm d) None of the above	**(b)**
2.	Which of the following is the most corrosion resistant a) Mild steel c) Copper b) Cast iron d) Galvanised mild steel	**(c)**
3.	Which of the following is not a suitable place for placing earth electrode? a) Marshy ground c) Clayey soil b) Loamy soil d) River bed	**(d)**
4.	Which of the following is Earth enhancement material is a) Bentonite c)Bonding Resins b) Graphite & Portland d) All of the above	**(d)**
5.	In CLASS-C protection SPD is provided between _____. a) Phase & neutral c)Phase & Earth b) Neutral & Earth d) External Power supply	**(a)**
6.	Resistivity of wet, moist and dry soil is _____Ohm/meter. a) 100,1000,5000 c)10, 100, 1000 b) 500, 100, 1000 d)10, 500, 1000	**(c)**
7.	MOV and GAS DISCHARGE TUBES are used in _____protection. a) CLASS-D c) CLASS-B b) CLASS-A d) CLASS-C	**(a)**
8.	Earth is a _____ a) Good conductor b) Bad conductor c) Equipotential surface d) None of the above	**(c)**
9.	Characteristics of good earthing system are- a) Excellent Electrical Conductivity b)High Corrosion Resistance c) Mechanically Robust and Reliable. d) All of the above	(d)
10.	The minimum distance between any two earth is _____ a) 5m b) 6m c) 2.5m 3) 3m	(d)
11.	Surge protection device Rating is 50KA (10/350 micro seconds) means, 50KA indicates max. Surge Current,10 micro seconds is time taken to reach _____and 350micro seconds is time taken to fall to the_____.	Peak value, half peak value

PDH - MUX

1.	What is the output rate and no. of time slots in a MUX a) 1.024 Mbps, 30 time slots b) 2.048 Mbps, 32 time slots c) 2.048 Mbps, 30 time slots c) 1.024 Mbps, time slots	**(b)**
2.	Conference card provides _____ simultaneous conference at a time a) 12 b) 10 c) 20 d) 15	**(d)**
3.	Interface available in a MUX are – a) 4 W/2 W E&M. b) Subscriber interface/ Hot line interface. c) Exchange interface. d) All of the above	**(d)**
4.	Webfil MUX has _____ no. of total slots, dedicated slot for NIM & Tributary module are _____ & _____ a) 13, 3 & 4 b) 13, 2 & 3 c) 14, 2 & 3 c) 14,3 & 4	**(a)**
5.	_____ wires are required for IN/OUT of a channel in PD MUX a) 32 b) 64 c) 30 d)60	**(b)**
6.	KLM of 31st E1 is _____ a) 1-4-1 b)1-3-1 c) 2-4-1 d)2-4-5	**(c)**
7.	For branching in STM _____ card is used a) TET b)TEX c) LI d) Control	**(c)**
8.	Bit rate of STM-1 is _____ a) 155.520 M bit/s. b) 155.520 bps c) 139.264 Mbps d) 139.264 bps	**(a)**

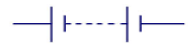
Data Networking

1.	Mention the type of cable used to connect DTE to DTE devices with each other a) cross b) straight	**(a)**
2.	Mention the type of cable used to connect DTE to DCE devices with each other a) cross b) straight	**(b)**
3.	In RJ45 connector, what are the pins used for Ethernet transmission a) 1, 2, 3, 4 b) 1, 2, 3, 6 c) 1, 2, 3, 8 d) 1, 2, 3, 5	**(b)**
4.	Device used to connect different LANs together is a) LAN Extender b) Switch c)Router d) Firewall	**(c)**
6.	Data flow between two devices can occur in a _____ way. a) simplex b) half-duplex c) full-duplex d) all of above	**(d)**
7.	PRS works on software called a) ARPANET b) CONCERT c) UTN d)IRPSM	**(b)**
8.	PRS network is based on _____ topology a) Ring b) Star c) Mesh d) Bus	**(c)**
9.	In a UTN, _____ printers are used for UTS and PRS a) Common b) Separate(b) c) both (a) & (b) d) None of the above	(b)
10.	Maximum number of hops between booking location and central location for primary path shall be limited to a) 4 b) 5 b) 3 d) 6	(a)
11.	Data rate of Fare terminal repeater is _____ a) 9.6 bps b) 9.6 kbps c) 1024 bps c) 1024 kbps	(b)
12.	The _____ port is used for Initial configuration of router a) Serial port b) Ethernet port c) Console port d) Auxiliary port	(c)

Power Supply

1.	Specific gravity of a fully charged Lead Acid cell is, ( ) (A) 1180 (B) 1240 (C) 1220 (D) 1200	**(c)**
2.	The main cause for all defects in Lead Acid cell is, ( ) (A) Sulphation (B) Short circuit (C) reverse polarity (D) buckling	**(a)**
3.	Due to sulphation plate resistance, ( ) (A) increases (B) decreases (C) no change (D) non of the above	**(a)**
4.	Sulphation in Lead Acid cell is due to, ( ) (A) excessive discharge (B) impurities in distilled water (C) Keeping the cells in discharged state in longer time (D) all the three above	**(d)**
5.	In a cell/battery the current flows out from, ( ) (A) negative terminal (B) positive terminal (C) both (D) none of the above	**(a)**
6.	Loss of negative active material from the grids may be, ( ) (A) high specific gravity acid (B) Element short circuit (C) excessive temperature (D) all the three	**(d)**
7.	The backup time in UPS depends on, ( ) A) Load B) Voltage C) Batter capacity D) all the three	**(d)**
8.	Standard battery voltage and capacity for OFC equipment is ___ & ___. a) 48V & 220AH b)-48V and 240AH c) 48V & 200AH d) 48V and 250AH	**(c)**
9.	Charging voltage of a 2V cell in Float charging is _____V. a) 2.15 – 2.25 V b) 2.4 V c) 2.3V d) 2.5V	**(a)**
10.	Charging voltage of a 2V cell in Boost charging is _____V. a) 2.15 – 2.25 V b) 2.4 V c) 2.3V d) 2.5V	**(b)**
11.	Charging current in trickle charge is _____V a) 2V b) 2.1V c) 1V d) 1.5V	**(c)**
12.	INMARSAT works on _____V. a) 24 V AC b) 12 V AC c) 24 V DC d) 12 V DC	**(b)**
13.	On connecting 24 cells of 2V and 200AH capacity, resultant battery voltage and capacity will be_____V and _____AH. a) 24 V, 200 AH b) 48 V, 400AH c) 24 V, 4800 AH d) 48 V, 4800AH	**(d)**
14.	Shedding means falling of active material from the plates (T / F)	**(T)**
15.	Buckling of cell plates takes place due to excessive charging or discharging (T / F)	**(T)**
16.	To avoid lead corrosion on battery connectors and terminals apply Petroleum jelly (T / F)	**(T)**

Misc

1.	_____ phone is a point to point communication device a) Auto phone c) LC gate phone b) Magneto phone d) Control phone	**(b)**
2.	Frequency range of VHF communication is _____ a) 30 – 300 Mhz c) 3 – 30 GHz b) 30 – 300 KHz d) 3 – 30 MHz	**(a)**
3.	Periodicity of ART inspection by ART nominated staff, ASTE/DSTE, Sr.DSTE/DSTE is a) Monthly, quarterly,yearly b) 15 days, monthly, yearly c) 15 days, quarterly, yearly d) Monthly, half yearly, yearly.	**(c)**
4.	Codal life of GPS clock is a) 10 years b) 5 years a) 15 years d) 12 years	**(a)**
5.	Voltmeter should always be connected in a) Series b) Parallel c) any of the above c) None of the above	**(b)**
6.	Magneto telephone works on _____V. a) 5 V DC b) 3 V DC c) 3 V AC d) 12 V DC	**(b)**
7.	Centralized power supply Electronic LC Gate telephone works on _____/_____ V DC a) 3 V/ 12V b) 12 V/48 V c) 3 V/ 24 V d) 12 V/24 V	**(d)**
8.	 is symbol of _____ a) Current b) Voltage c) Battery d) Cell	**(c)**
9.	Zener diode is used for a) Forward bias b) Reverse bias c) Both (a) & (b) d) None of the above	**(b)**
10.	_____ no. of telephones can be provided throught LTE a) 4 b)8 c) 12 d) 20	**(d)**
11.	Telephone connection given through MTWE can be extended upto _____Km a) 2 Km c) 3 Km c) 1.5 Km d) 5 Km	**(a)**
12.	Maximum gain of amplifier in Equilizer amplifier system should be _____dB. a) 15dB b)25dB c) 50dB d)20dB	**(d)**
13.	Voice data logger is used in _____ office a) NOCC b)Control c) Master office d) Exchange	**(b)**

14.	VF transformer works like a _____ a) Low pass filter b)High pass filter c) All pass filter d) Band pass filter	**(a)**
15.	A human ear can sense sound frequency in _____ range. a) 20 to 200Hz b) 200 to 2000Hz c)2 to 20000z d) 20 to 20000Hz	**(d)**
16.	Trans of telephone is on_____ pins of EC socket a) 1,6 b)2,5 c)1,3 d)3,6	**(b)**
17.	Trans of telephone is on_____ pins of EC socket a) 1,6 b)2,5 c)1,3 d)3,6	**(a)**
18.	_____ amplifier is used in Emergency circuit a) Current amplifier b) Voltage amplifier c) Leak Amplifier d) Transconductance amplifier	**(c)**
19.	Ringing voltage of Magneto telephone is _____ a) 25 V AC b) 75 V DC c) 25 V DC d) 75 V AC	**(d)**
20.	Mega mic is used for _____ a) Conference system b) Recording purpose c) Announcement d) None of the above	**(c)**
21.	_____ is used as electrolyte in a lead acid cell. a) Hydrochloric acid b)Dilute Sulfuric acid c) Concentrated Sulfuric acid d) Acetic acid	**(b)**
22.	NEXT and FEXT should be better than ___ &___dB a) 65 & 61 b) 60 & 85 c) 60 & 70 d) 61 & 65	**(d)**
23.	Attenuation and loop resistance should be tested a) monthly b) quarterly c) yearly d) half-yearly	**(a)**
24.	Microphones are _____ a) Omni directional b) Bi-directional c) uni-directional c) All of the above	**(d)**
25.	In VIP system PA arrangement _____ loudspeaker are preffered a) column b) horn c) cone d) cabinet	**(a)**
26.	Railway uses _____no. of fibers a) 2 b)4 c)24 d)8	**(b)**

Exchange

1.	What is the loop resistance of 0.5mm copper pair ? A. 150 Ω B. 160 Ω C. 170 Ω D. 182 Ω	**(d)**
2.	What is the data rate of one voice channel ? A. 64 bps B. 64 kbps C. 64 Mbps D. 64 Gbps	**(b)**
3.	When dialed number is busy which tone is heard ? A. DT B. BT C. RBT D. NUT	**(b)**
4.	What is the potential on the subscriber line in on hook condition ? A. 12v B. 24v C. 36v D. 48v	**(d)**
5.	What is the potential on the subscriber line in off hook condition ? A. 12v B. 24v C. 36v D. 48v	**(a)**
6.	What is the ringing voltage for analog phones in ISDN exchanges ? A. 75V@40 Hz B. 75V@35 Hz C. 75V@30 Hz D. 75V@25 Hz	**(d)**
7.	How many pairs are required to connect PRI trunk ? A. 1 B. 2 C. 3 D. 4	**(b)**
8.	69. What is the data rate of BRI ? A. 192 kbps B. 194 kbps C. 196 kbps D. 198 kbps	**(a)**
9.	70. What is the data rate of PRI ? A. 2048 bps B. 2048 kbps C. 2048 Mbps D. 2048 Gbps	**(b)**
10.	How many voice channels are there in BRI & PRI ? A. 1 & 26 B. 2 & 30 C. 3 & 28 D. 4 & 32	**(b)**
11.	Up to what length a digital telephone works on 0.5mm dia copper pair ? A. 1 km B. 2 km C. 3 km D. 4 km	**(d)**
12.	IPM(Integrated Protection module) provided at _____ A. IDF B. MDF C. External Power supply D. None of the above	**(b)**
13.	Modern exchanges are designed on the following concept_____ A.SPC B. EBD C. CCN D. PSC	**(a)**
14.	How many pairs are required to connect a telephone _____ A. 1 B. 2 C. 3 D. 4	**(a)**