

विषय :- सिगनलिंग संबन्धित प्रश्नोत्तर

Track Circuit :		
S.N.	Question	Answer
1.	What are the means to detect the presence of a train/ occupancy of track? a) DC Track Circuit , b) Axle counters c) AFTC, d) All of above.	d)
2.	Which type of track circuit is used in AC RE area? a) DC single rail Track Circuit , b) AC track circuit c) DC double rail track circuit, d) None of these.	a)
3.	The highest resistance (Train Shunt Resistance) which, when applied across the track, can make the track relay of DC track circuit drop should be :- a) 1.0 Ohm , b) 0.5 Ohm c) 5 Ohm, d) 10 Ohm	b)
4	What is the Minimum Permissible Resistance of a Concrete Sleeper after six months from the date of manufacture in AC RE area? a) 500 Ohms , b) 250 Ohms c) 150 Ohms, d) 100 Ohms	a)
5	What is the minimum permissible ballast resistance for DC track circuit in station section? a) 2 Ohms per Km, b) 5 Ohms per Km c) 4 Ohms per Km, d) 3 Ohms per Km	a)
6	What is the minimum permissible ballast resistance for DC track circuit in block section? a) 2 Ohms per Km, b) 5 Ohms per Km c) 4 Ohms per Km, d) 3 Ohms per Km	c)
7	What should be the maximum excitation at relay end for QT2/ QTA2 relay. a) 400% b) 250% c) 125% d) 300%	d)
8	What should be the minimum Resistance of Glued Joints in dry condition when a meggering voltage of 100 V DC is applied across the joint? a) 25 MΩ, b) 30 MΩ c) 20 MΩ, d) 35 MΩ	a)
9	What should be the minimum Resistance of Glued Joints in wet condition when a meggering voltage of 100 V DC is applied across the joint? a) 2 KΩ, b) 3 MΩ c) 2 MΩ, d) 3 KΩ	d)
10	What is the minimum percentage release of track relays? a) 25% of its rated pickup value, b) 78% of its rated pickup value c) 68% of its rated pickup value, d) 55% of its rated pickup value	c)
11	Block Joint protecting Fouling shall not be less than -----from Fouling mark. It shall be towards divergence. a) 3 meters, b) 1.5 meters c) 2 meters, d) 2.5 meters	a)
Points		
1	Difference between the normal operating current and the operating current under obstruction should not be less than a) 0.5 Amp, b) 1 Amp c) 1.5 Amp, d) 2.5 Amp	a)
2	What test is required to be carried out after replacement of the point machine? a) Correspondence test, b) obstruction test c) Track Locking Test , d) all of above	d)
3	The gap between the stretcher bar and foot of the rail shall not be more than..... a) 0.5 mm, b) 1 mm c) 1.5 mm, d) 2.5 mm	c)

S.N.	Question	Answer
4	What is switch opening of thick web switch? a) 200 mm, b) 220 mm c) 115 mm, d) 160 mm	d)
5	Spring Setting Device (SSD) is provided in thick web switch between sleeper number ---- and ---- at Junction of Rail Head (JOH), in lieu of stretcher bars? a) 13 & 14, b) 3 & 4 c) 4 & 5 d) 12 & 13	a)
6	What is ensured in obstruction test with 5 mm thick test piece placed between the switch and the stock rail at 150 mm from the toe of the switch? a) The point should not be locked. b) Detector contacts should not make. c) Friction clutch should slip. d) All of above	d)
7	The clearance of ground connection rods from bottom of the rail should be a) 30 mm, b) 35 mm c) 25 mm d) 15 mm	c)
8	The periodicity of testing of point tail cable from K-Board in Normal & Reverse position with 100 V megger should be:- a) fortnightly, b) monthly c) quarterly d) weekly	b)
9	The periodicity of P-6 schedule of point for Mono Block Concrete sleeper (MBC) layout is :- a) Half yearly for SSE in-charge, b) Yearly for SSE in-charge c) Monthly for sectional JE/SSE , d) Yearly for sectional JE/SSE	b)
10	The periodicity of Joint inspection of point & crossing with JE/SSE(P.Way) a) Half yearly, b) Yearly c) Monthly , d) Quarterly	d)
11	When point set and locked in normal _____ contact make a) NC & RD, b) ND & RC c) NC & RC , d) ND & RD	b)
Signals		
1	What is the minimum visibility distance of all Stop Signals in Multiple Aspect Signalling system? a) 200 meter , b) 300 meter c) 400 meter, d) 500 meter	a)
2	What minimum number of route LEDs should lit at site to pick up Route ECR. a) 4 Nos. , b) 2 Nos. c) 5 Nos., d) 3 Nos.	d)
3	Fuse capacity in all signalling circuits should not less than ---- times the current. a) 2.0 , b) 2.5 c) 1.5 , d) 3.0	b)
4	What aspect comes in middle of 3-aspect signal arrangement? a) Red b) Green c) Yellow d) white	c)
5	What is the periodicity of replacement of all type of fuses in signalling circuits other than suburban route? a) Half yearly, b) Yearly c) 3 yearly , d) Quarterly	c)
6	In a double distant territory, if second distant is displaying double yellow then what would be the possible aspect of home signal? a) Red or Yellow with route c) Yellow or Green b) Red or Yellow d) Red or Green	a)
7	What is the block overlap in Multi Aspect Colour Light Signalling system? a) 180 meter, c) 400 meter b) 120 meter, d) 1000 meter	a)

S.N.	Question	Answer
8	What is the signal overlap in Multi Aspect Colour Light Signalling system? a) 180 meter, c) 400 meter b) 120 meter, d) 1000 meter	b)
9	What should be the rating of the fuse provided on housing of route LED aspect? a) 100 mili ampere, 250V , c) 400 mili ampere, 220V b) 120 mili ampere, 220V, d) 100 mili ampere, 200V	a)
10	If any signal fixed less thanfrom center of track, it must be zebra painted. a) 2.36 meter, b) 3.00 meter c) 3.26 meter , d) 4.00 meter	a)
11	Total aspect in distant signal in double distant signal territory is/ are a) attention, b) proceed c) caution , d) a&b	d)
Power Supply		
1	What is the Codal life of cell used for signalling circuit? a) 4 years, b) 5 Years c) 3 years, d) 6 years	a)
2	In IPS system, Inverter output is used for the load of – a) EJB of axle counters , b) UP & Down side signals c) Evaluators of Axle counter, d) DC Track circuits .	b)
3	What will be the size of input feeder cable from Auxiliary Transformer (AT) to IPS room for 10 KVA AT a) 2x70 Sq mm Aluminium , b) 2x25 Sq mm Aluminium c) 2x35 Sq mm Aluminium, d) 2x300 Sq mm Aluminium	a)
4	What should be the cross section area of copper cable for connecting IPS to Battery bank of 300 AH? a) 10 Sq mm, b) 16 Sq mm c) 25 Sq mm, d) 5 Sq mm	c)
5	Whenever the battery of IPS has come on to the load and has discharged by ----- D.O.D. (Depth of Discharge) then first Red indication lit with description “START GENERATOR” with audio alarm. a) 40%, b) 50% c) 60%, d) 35%	b)
6	The IPS systems and its individual modules are having earth terminals and all these are properly earthed with earth resistance of less than ---- Ω . a) 10 Ω , b) 3 Ω , c) 1 Ω , d) 2 Ω	d)
7	If the VRLA battery is being stored for more than ----- months, freshening charge should be given once in ----- months. a) Three, b) Two, c) one, d) six	a)
8	What is the Specific gravity of the fully-charged Lead Acid cell in terms of Hydrometer reading? a) 1210 \pm 5, b) 1200 \pm 5 c) 1190 \pm 5, d) 1180 \pm 5	a)
9	What is the end point voltage of the discharged cell? a) 2.1 V, b) 2.2 V c) 1.0 V, d) 1.8 V	d)
10	If Low maintenance lead acid battery is idle, then normal charge is given ---- a) once in a three month, b) once in fifteen days c) once in a month, d) once in a two month	c)

Data Logger		
1	What is the minimum number of analog channels monitored by datalogger system? a) 32, b)25 c) 16, d) 64	a)
2	What is the maximum number of digital contacts monitored by datalogger system? a) 2048, b)512 c) 1024, d) 4096	d)
3	----- is provided for connecting printer in Datalogger. a) serial port , b) parallel port c) either serial or parallel port, d) None of above	b)
4	-----are provided for communication with other dataloggers, Central Monitoring Unit, Remote Terminal Unit, Electronic Interlocking system, Integrated Power Supply system etc. a) serial port , b) parallel port c) either serial or parallel port, d) None of above	a)
5	In Efftronics make Datalogger, capacity of each Digital input card is ----- a) 32 inputs, b) 64 inputs. c) 16 inputs, d) 40 inputs	b)
6	-----are required at stations and also at centralised place for networking of dataloggers. a) Modem, b) Remote Terminal Unit c) FEP , d) none of above	a)
Intermediate block signalling		
1	IBS exists on :- a) Double line, b) single line c) Multiple line, d) none of above	a)
2	In IBS block section, the maximum number of trains possible on a line is a) One, b) two c) Three, d) four	b)
3	In IBS the block overlap shall be a) 120 meter, b) 300 meter b) 180 meter, d) 400 meter	d)
4	In IBS the Telephone is connected to : a) Rear station, b) Advance station c) Both station, d) None of the above	a)
5	In IBS, the IB signal is controlled by the a) Rear station block instrument, b) Advance station FSS c) Rear station LSS, d) None of the above	a)

AXLE COUNTERS		
1	Transmitter coil is always connected -----the rail. a) outside, b) inside c) both side, d) None of above	a)
2	What are the frequencies used in HASSDAC of CEL make? a) 13 KHz & 15 KHz, b)15 KHz & 17 KHz c) 21 KHz & 23 KHz, d) 23 KHz & 25 KHz	c)
3	Multi-section Digital Axle Counter system consists of _____ a) Detection Point, b) Central Evaluator Unit and Reset Unit c) Relay Unit and Event logger and diagnostic terminal, d) All of these	d)
4	What is the resistance of vital relay of digital axle counter? a) 1000 ohm, b) 9 ohm c) 50 ohm, d) 100 ohm	a)

5	23 KHz carrier signals is generated by.....card in CEL make SSDAC a) Micro-controller Logic Board/ card, b) Modem Card. c) Signal Conditioning Card-2, d) Signal Conditioning Card-1	c)
6	What is the maximum current drain by DC-DC converter of CEL make SSDAC ? a) 300 mili amp., b) 1200 mili amp c) 200 mili Amp, d) 500 mili amp	b)
7	What is the recommended power supply for trackside electronic unit (EAK) for Eldyne make MSDAC? a) 54 VDC to 72 VDC, b) 44 VDC to 62 VDC c) 50 VDC to 70 VDC, d) 30 VDC to 45 VDC	a)
Signalling in RE area		
1	Protection screen of wire mesh is required to be provided and connected to an earth for signals falling within ----- from the live parts of the OHE. a) 2 meters, b) 3 meters c) 4 meters, d) 5 meters	a)
2	The distance between the signal and the mast in front of it shall not be less than - ---- a) 20 meters, b) 30 meters c) 10 meters, d) 40 meters	b)
3	The distance between the signal and the mast just in advance of signal shall be - ---- a) 20 meters, b) 30 meters c) 10 meters, d) 40 meters	c)
4	What is safe handling voltage in new design in AC electrified area? a) 500 V, b) 300V c) 600 V, d) 400 V	d)
5	The value of earth for protection screen of wire mess in RE area should not exceed ---- a) 10 Ω , b) 20 Ω c) 30 Ω , d) 15 Ω	a)
6	What is Catenary current in new design in AC electrified area in double line? a) 500 Amp, b) 1000 Amp c) 800 Amp, d) 400 Amp	b)
7	The structural traction bond is provided between --- a) OHE mast to negative rail/ un-insulated rail, b) two non-insulated rails of non track circuited area c) negative rail of adjacent single rail DC track circuit, d) non-welded negative rails	a)
8	What is the length of track circuit in the yard according to the immunity level of track relays in 25 KV AC areas for QTA2 relay for PRC sleeper? a) 750 meter, b) 450 meter c) 500 meter, d) 350 meter	d)
9	What is the Maximum length of direct feeding of signals on double line with 110 V AC feed in 25 KV AC electrified area? a) 220 meter, b) 180 meter c) 350 meter, d) 450 meter	a)
10	What is the Maximum length of direct feeding of signals on single line with 110 V AC feed in 25 KV AC electrified area? a) 220 meter, b) 180 meter c) 350 meter, d) 450 meter	b)
11	What is the maximum length of parallelism with factor of safety of 1.5 for QNA1 relays in 25 KV AC electrified area in Double line? a) 2.8 Km, b) 2.1 Km c) 3.0 Km, d) 1.5 Km	a)

Level Crossing Gate		
1	What is the minimum ATVU for interlocking of LC gates? a) 20000, b) 25000 c) 30000, d) 15000	a)
2	The raised or open position of the lifting barrier shall be ----- from the horizontal. a) within 85 to 90 degree, b) within 70 to 80 degree c) within 65 to 70 degree, d) within 80 to 85 degree	d)
3	What is the minimum ATVU for special class LC gates? a) 20000 , b) 50000 c) 30000, d) 25000	b)
4	What is the maximum length of Boom for Electric lifting barrier as prescribed by RDSO? a) 8.6 meter, b) 7.5 meter c) 9.7 meter, d) 10 meter	c)
5	Periodicity of replacement of Limit Switch of ELB in 'A' route is ... a) 1 year, b) 2 year c) 3 years, d) 2.5 years	a)
6	What is the timing of Dead approach locking at interlocked LC gates in all routes except sub-urban section? a) 30 seconds, b) 60 seconds c) 120 seconds, d) 90 seconds	b)
7	Sanction is required to be taken from ----- to interlock the LC gate? a) PCSTE, b) CRS c) PCOM, d) GM	a)
8	Working of LC gate is covered in ----- of SWR. a) appendix 'D' , b) appendix 'C' c) appendix 'B' d) appendix 'A'	d)
EI		
1	Co HR is taken as -----in EI system. a) vital input, b) vital output c) Non-vital input, d) non-vital output	b)
2	How many slots are available in card file of Microlok-II System of EI? a) 15 b)18 c) 20 d) 25	c)
3	Slot No..... is/ are used to accommodate Power supply PCB in Microlok-II System of EI. a)16 & 17, b) 20 c) 18 & 19, d) 1&2	a)
4	How many inputs are available in each Vital Input PCB in Microlok-II System of EI? a) 12 inputs, b) 15 inputs c) 10 inputs, d)16 Inputs	d)
5	In EI system NWKR & RWKR is taken as ----- a) vital input, b) vital output c) Non-vital input, d) Non-vital output	a)
6	VCOR relay in Microlok-II System of EI has ---- a) 6F/B dependent contact, b) 6F/6B independent contact c) 6F, 6B contact, d) All the above	a)
General		
1	What is the currency of CSTE sanction? a) one year, b) six months c) 18 months, d) 24 months	b)

2	A line on which train movements at speeds higher than ----- Km/h are permitted, should be isolated from all connected lines. a) 50 Km/h, b) 20 Km/h c) 30 Km/h, d) 40 Km/h	a)
3	What is the maximum allowable speed in standard III interlocking As per New Revised Para 7.131. a) 150 Km/h, b) 110 Km/h c) 140 Km/h, d) 130 Km/h	c)
4	Which type of route Indicator is provided in multiple aspect colour light signalling section for speed in excess of 15 Km/h? a) multi lamp type, b) stencil type c) Any route Indicator of approved design, d) Direction (Junction) type route Indicator	d)
5	What is the distance between Goods warning board and home signal? a) 1000 meter, b) 1400 meter c) 800 meter, d) 180 meter	b)
6	What is the purpose of providing catch siding? a) to protect station section, b) to protect block section c) to protect station & block section, d) None of above	a)
7	What is the Maximum permitted gradient in station yard ? a) 1 in 80, b) 1 in 100 c) 1 in 400, d) 1 in 1200	c)
8	After how many correction slips, new SWR is issued. a) 4, b) 5 c) 3, d) 2	b)
9	What is the periodicity of meggering of tail cable? a) 12 months, b) 3 months c) 6 months, d) 15 months	c)
10	What is the periodicity of meggering of main cable? a) 12 months, b) 3 months c) 6 months, d) 15 months	a)
11	-----is HQ controlled plans. a) location details, b) Signal Interlocking Plan c) track circuit plan, d) cable route plan	b)
12	Periodicity of selection table testing for EI is--- a) 2 year, b) 3 year c) 4 year, d) 5 year	d)
13	Periodicity of selection table testing for PI/RRI is--- a) 2 year, b) 3 year c) 4 year, d) 5 year	b)
14	SIP(Signal Interlocking Plan) is prepared on the basis of ---- a) approved ESP, b) approved Selection table c) SWR drawing, d) None of above	a)
15	Station working rule (SWR) is prepared on the basis of ---- a) Selection table, b) SIP c) SWR D, d) ESP	c)
16	What is the overhauling period of Double Line Block Instruments? a) 8 year, b) 9 year c) 10 year, d) 7 year	d)
17	What is the overhauling period of Single Line Token and Tablet Instruments? a) 8 year, b) 9 year c) 10 year, d) 7 year	c)
18	What is the relay nomenclature of Signal Button Relay in Siemens installation? a) GNR, b) GNPR c) SR, d) EGNR	a)

19	How many shunt signals can be controlled by one Shunt signal group in Siemens installation? a) 1, b) 2 c) 3, d) 4	b)
20	Calling -On clearance time is.... a) 120 secs, b) 90 secs c) 30 secs, d) 60 secs	d)
21	For shifting of signal from left hand side to right hand side, sanction is required. a) PCOM, b)PCE c) CRS, d) PCSTE	a)
22	Currency of CRS sanction is..... a) 1 year, b) 2 year c) 9 months, d) 18 months	a)
23	What is codal life of axle counter. a) 10 years, b) 15 years c) 25 years, d) 30 years	b)
24	Write the full form of following:-	
	a) UFSBI	Universal fail safe interface
	b) VDU	Visual display unit
	c) ECR	Lamp checking relay
	d) HADAC	High availability digital axle counter
	e) MAUQ	Multi aspect upper quadrant
	f) FEP	Front end processor
	g) PCSTE	Principle Chief signal & Telecom Engineer
	h) ATVU	Average train vehicle unit
	i) IPS	Integrated Power supply
	j) LED	Light Emitting Diode
	k) MSDAC	Multi section digital axle counter
	l) BPAC	Block proving by Axle counter
	m) EKT	Electric Key Transmission
	n) CRB	Chairman of Railway Board
	o) SSDAC	Single section Digital axle counter
	p) CIU	Central Interlocking Unit
	q) EPROM	Erasable Programmable Read Only Memory
	r) MTTR	Mean Time To Repair
	s) MTBF	Mean Time Between Failure
	t) PCB	Printed Circuit Board
	u) SAT	Site Acceptance Test
	v) FAT	Factory Acceptance Test
	w) OC	Object controller
	x) TAN	Technical Advisory Note
	y) SEM	Signal Engineering Manual
	z) CENELEC	European Committee For Electro Technical Standardization
	aa) OFC	Optical Fibre Cable
	ab) IBS	Intermediate Block Signalling
	ac) RDSO	Research Development and Standards Organisation
	ad) ROM	Read Only Memory
ae) SIL	Safety Integrity Level	
af) DOD	Depth of Discharge	
ag) MOV	Metal Oxide Varistors	
ah) SMPS	Switch Mode Power Supply	
ai) VRLA	Valve Regulated Lead Acid	
aj) LMLA	Low Maintenance Lead Acid	
ak) FRBC	Float Rectifier Cum Boost Charger	
al) AVR	Automatic Voltage Regulator	

S.N.	Question	Answer
Fill in the blanks :-		
25	EBD means _____.	Emergency Breaking Distance
26	The normal aspect of advance starter is..... in absolute block system.	RED
27	Shunt signal cannot be placed below the signal	Last stop signal
28	The distance sufficient to ensure Safety is known asDistance	adequate
29	At night the semaphore signal, backside displays a small white light known as.....	Back light
30	Braking distance means the distance travel by a train after itsare applied	Brakes
31	In double line section, if the first point is a trailing point, then it is indicated by providing a facing towards the station.	BSLB
32	When----- is provided warning board need not be Provided.	second distant signal
33	The section capacity can be increased by providing astation between two Block stations	C class
34	Intermediate Block signalling is replacement of ----- station.	C class
35	CSR means	clear standing room
36	The length of the boom should not be more thanin any case	9 meter
37	Full form of G&SR is	General and Subsidiary Rules
38	Full form of IRS drawing is	Indian Railway Standard Drawings,
39	Signal Sighting committee report is consisted of	Signal Inspector, Loco inspector and Traffic inspector
40	The existing Broad Gauge in Indian railway is	1676 mm
41	The Signalling Plan is approved by.....	PCSTE
42	System and working of signalling, interlocking and working of points in detail is described in -----of SWR.	Appendix B