QUESTION & ANSWERS FOR THE POST OF SHUNTING MASTER – II

Q1. Define the following.

a. Adequate distance.

1) The distance kept free without any obstruction to ensure safety is known as adequate distance.
2) Adequate Distance is of two types. They are
a) Block over lap (b) Signal Over lap
3) Block Over lap means the distance kept free without any obstruction. Before granting line clear from First Stop Signal(FSS).
In MASit should not be less than 180 metres
In TAS it should not be less than 400 metres.
In MAS it measured from Home signal.
In TAS It measured from outer signal.
5) Signal over lap means the distance kept free without any obstruction before taking of reception signals for direct reception.
In MAS it should not be less than 120 metres.
In TAS it should not be less than 180 metres.
The signal over lap is measured from outer most trailing points in single line and form starter on double line.

b.Block Section.

Block section means that portion of running line between two block stations on to which no running train may entre until line clear has been received from the block stationin advance.
No train is allowed to enter into block section unless loco pilot of a train is given authority to proceed under the system of working.

C.Station Section.

Station section means that section of station limits in class"B" station

Two Aspect Signalling Station

On double line from Home signal to Last stop signal of the station on either directions.
On single line between Two Shunting Limit Boards or Advance starters. Or
Between Two Home signals, if there are no SLBs or Advance starters. Or
Between Two Outermost Facing points, if there are no SLB's Advance starters and Outer signals.

Multiple Aspect Signal Station

On double line between Outer most facing points and Last stop signal of the station on either direction. Or
Between Block Section Limit Board where provided and Last stop signal of the station
On single line Between Shunting Limit Boards or Advance starters. Or
Between Two Outermost facing points, if there are no SLBs or Advance starters.

d.Facing and Trailing points .

According to the direction of a train or vehicle moves over them points are called facing or trailing points.

Facing Points

1. The points which changes the direction of a train by its operation are called Facing points.
2.Speed over facing points depends on interlocking.
3.Train passes from toe end
4.Locking is compulsory before train movement.

5.If not set properly and locked train may take two routes and derails.

Trailing points

1. The points which cannot change the direction of a train by its operation are Called Trailing points.
2.Speed does not depend on interlocking.
3. Train passes from heel end.
4.If not set properly and locked train will not derail but damages the points.

e. Fouling Mark:

1. Fouling mark means a cement mark provided between two lines at both ends Inside the points where fixed standard dimensions infringe.
2.Providedto indicate the Loco pilot and Guard of a train where to stop at a station.
3.Whenever train arrives and stops at a station the station staff shall ensure fouling mark clearance from Guard of a train without fail before authorising other movement

f.Inter locking

Inter locking means an arrangement of signals, points and other appliances operated in a proper sequence either from a panel or a lever frame mechanically or electrically or by both to ensure safety.

Inter locking is of four types

(i) Standard – I speed Up to 50 KMPH over facing points
(ii) Standard – II speed Up to 110KMPH over facing points
(iii) Standard – III speed Up to 140 KMPH over facing points
(iv) Standard – IV speed Up to 160 KMPH over facing points

Essentials of Inter lockingisSetting, Holding and locking of route and to Preventing conflicting movements

(g)Point indicator:

1.Point Indicator is a device work with points to show which direction the points are set.
2.Provided for running lines when single arm home signal or when common starter signalis provided or when there are no departure signals at all.
3.When points are set to main line or straight line the point indicator shows white target by day and white light by night.
4.When points are set to loop line or turnout line the point indicator shows no target by day and green light by night.

(h) Trapindicator:

1.Trap Indicator is a device work with points to show weather the trap point is set or open
2.Provided for non running lines
3.When trap point is open the trap indicator shows red target by day and red light by night.
4.When trap point is set the trap indicator shows knife edge or green target by day and green light by night.

Q2) Briefly explain classification of stations

AnsClassification of stations: Stations are mainly classified into two categories.
(1). Block stations and (2).Non Block stations.

Block stations:

Block stations are those stations at which the Loco Pilot of a train must obtain an authority to proceed under the system of working to enter the block section with his train.

There are four types of block stations.

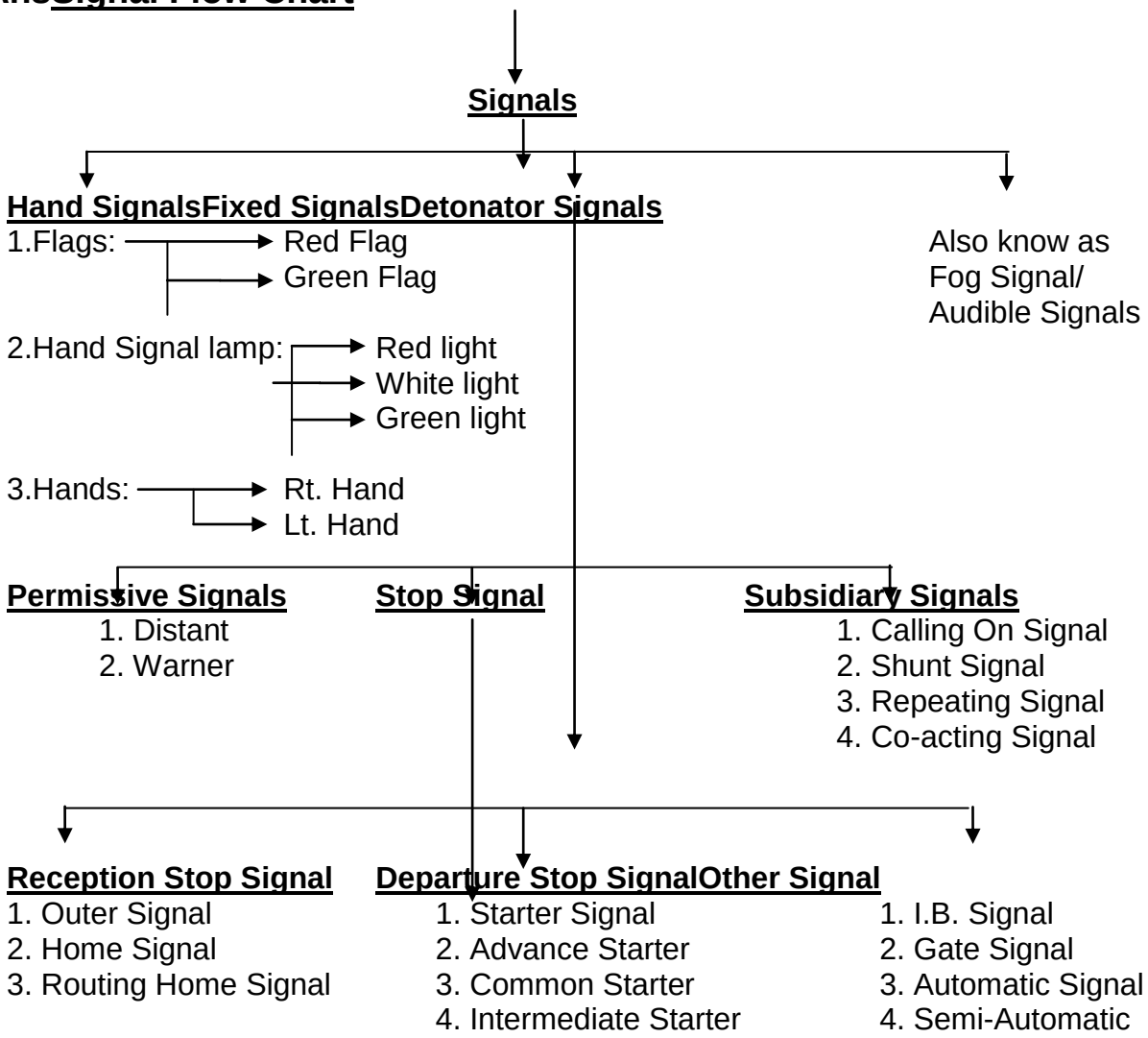
1) “A” class stations 2) “B” Class stations
3) “C” class stations 4) Special class stations.

Non Block stations:

Non block stations are stations situated between two consecutive block Stations and do not form the boundary of any block section. Also called “D” Class stations or halt stations or contract stations or commercial stations etc.

Q3) Draw a flip chart of Various types of signals which are in use in Indian Railways

AnsSignal Flow Chart



Q4.ExplainHandSignals and how to use them on different occasions.

Ans.HAND SIGNALS

The Signals which are shown by hands by using flags or hands by day and light by night are known as “Hand Signals”

1.During day time red and green flags are to be used without fail.
2.In emergencies in the absence of flags hands also can be used.
3.During night tri-colour hand signal lamp is to be used which consist of Red, Green and white light.

Hand Signals are used on (8) eight occasions.

Normal Three(3)

1. Stop
2. Proceed
3. Proceed slowly

Shunting four (4)

4. Move forward
5. Move Backward
6. Coupling
7. Stop

Unusual (1)

8.Train Parting

Normal

1. Stop Hand Signal.

> By showing red flag or by raising both arms with hands above the head during day.
> By showing red light or by waving white light violently across the body horizontally during night.

2. Proceed Hand Signal.

> By showing green flag or by holding one arm steadily parallel to head during day.
> By showing green light steadily during night.

3.Proceed Slowly Or Cautiously.

> By waving green flag up and down or by waving one arm up and down vertically during day.
> By waving a green light vertically up and down by night.

Shunting.

4.Move away from the person signalling (Forward Movement).

> Day : Moving green flag or hand up & down slowly
> Night : Moving green light up & down slowly

5.Move towards person signalling (Backward Movement).

> Day : Moving green flag side to side across the body or hand in the same manner.
> Night : Moving green light hand signal lamp across the body side to side

6.Coupling.

> Day: By raising both hands with red & green flag above the head and moving them towards each or by hands in the same manner without flags.
> Night : Holding green light above the head and moved by twisting the wrist.

7.Stop.

> Day : By red flag or by raising both hands above the head in ‘v’ shape and palms towards loco pilot.
> Night : Red light or white light waving across the body.

Unusual.

8.Train Parting Signal.

> By waving green flag up and down vertically as high as possible and as low as possible or
> By raising both hands above the head keeping together and separating smartly during night.

> By waving white light up and down as high as possible and as low as possible during night.

Q5.Briefly explain Shunt Signals and it's working.

Ans. SHUNT SIGNAL

1. It is a subsidiary signal.
2. Can be provided in both Multiple Aspect &Two Aspect Signalling Sections.
3. Provided either Independent or below a stop signal except First Stop Signal.
4. Three types : Semaphore arm type
   Disc type
   Position light type
5. Protects points.
6. Should be used only for shunting purpose.
7. Semaphore arm type – have short arm, painted red in colour with white bar placed only with approved special instruction.
8. Disc Type – White Disc Painted with a Red bar across it.
9. "ON" POSITION : Horizontal position of bar by day and red light by night.
10. "OFF" POSITION : Two Aspect Signalling Territory – 45 to 60 degree below the Horizontal of red bar by day and green light by night.
    Multiple Aspect Signalling Territory – 45 to 60 degree above the Horizontal of red bar by day and yellow light by night.
11. Position light – In a box three miniature white lights are provided in a triangle shape two below and one above. Provided in colour light signalling territory only.
12. "ON" POSITION : When two horizontal white lights burn.
    "OFF" POSITION : When two lights burn diagonally (cross).
13. When provided independent it gives Aspects both in "ON" position and "OFF" position.
14. When provided below stop signal it gives no information or Aspect in "ON" position.
15. In"OFF"position it gives information to the Loco pilot to proceed cautiously for shunting.
16. When shunt signal fails points are to be clamped and padlocked and T-369(3b) is to behanded over to the Loco pilot before shunt movement.

Q6. What is shunting. How many kinds ofshunting are there briefly ` explain them.

Ans: Shunting means movement of vehicles, vehicles or a self propelled vehicle from on line to another for attaching detaching or for any other purpose.

There are five types shunting. They are

1. Hand shunting
2. Flat shunting
3. Loose shunting
4. Fly shunting
5. Hump shunting

Hand Shunting:Means movement of vehicles by employing manual labour from one placeto another

Flat shunting:Means when vehicles are moved continuously from one place to another with engine attached.

Loose Shunting: Means pushing vehicles by an engine and allowing them to fun with engine un attached.

Fly Shunting:Means in order to send different vehicles on to different lines, the vehicles are given a push by an engine and are separated at pointsby smart reversal of points by points staff.

Hump Shunting: It is a kind of fly shunting. In this shunting neck has camel hump to create an artificial gravity when wagons are pushed to the apex by an engine and detached.

Q7. What is shunting.What precautions are to be taken while Performing shunting

Ans: Shunting means movement of vehicles or self propelled vehicle from onelineto another for attaching detaching or for any other purpose.

Shunting Precautions.

1. Shunting is controlled by fixed stop signals or hand signals or through verbal instructions.
2. Outer, Home and LSS shall not be used for shunting.
3. Guard shall supervise shunting where separate shunting staff is not provided.
4. T-806 shunting order is to be given to Loco Pilot where required without fail.
5. All un-signalled movements are to be done duly setting clamping and pad locking of points or cotter bolt locking of points.
6. When shunt signal/Shunting Permit Indicator becomes defective Concerned Pointsare to be set,clamp and pad lock and Loco Pilot shall be given T.369 (3b) and Proceed Hand Signal is to be exhibited at the foot of defective Shunt Signal/Shunting Permitted Indicator.
7. Ensure pipe connections and air continuity while performing shunting.
8. While performing shunting on passenger coaches occupied by passengers, stop the engine with or without coaches at 20 mtsand than attach.
9. Maximum speed for shunting shall not exceed - 15KMPH.
10. Coaching stock, live stock ,oil tanks explosives etc. - 08 KMPH
11. Roll bearing one wagon - 05 KMPH, More than One - 02 0r 03 KMPH
12. If a light engine is to moved on to a line on which passenger train is waiting, points man shall accompany duly intimating Loco Pilot / Shunter.
13. Loco Pilot /Shunter shall not unman the engines when moved on passenger train occupied line.
14. Whenever engine is to be detached from a Passenger occupied train or empty rake for shorter duration the formation is to be secured by applying SLR hand brakes and also by keeping skids/wedges without fail.

Q8. What is shunting? What are the authorities are used for shunting.

Ans: Shunting means movement of vehicles/ wagons from one line to another line with or without engine or a light engine or any other self propelled vehicle for attaching or detaching or for any other purpose.

Within Station Section: T 806 memo (Shunting Order) is to be given to Loco pilot. At major stations where shunting is performed by separate shunting staff with shunter and if Sr. DOM/DOM notifies then T 806 memo not required.

Block Section: T 806 memo and authority for entering into block section is to be given to Loco Pilot and an operating employee shall travel by engine.

Shunting Authorities

Single line Within Station Section

Token/Token less section up to Advance starter/SLB - T 806 memo

Single line in Block Section

Token Section beyond Advance Starter/SLB up to FSS - T 806 memo

Tokenless section Beyond Advance Starter up to FSS - T 806 + Shunt Key or T 806 + Private Number

Token/Tokenless section beyond First Stop Signal - Treated as train movement. Loco pilot shall be given an Authority to Proceed + T 806 memo + manuscript memo to push

back and all relevant signals can be taken 'OFF'.

Shunting in the face of approaching train

Generally not permitted. If permitted shall be incorporated in SWR. SLB/Advance Starter must be provided. A shunting warning board known as 'Rhombus' board shall be provided in rear FSS at an adequate distance.

Double line Within station section - T806 Memo to be given to Loco Pilot.

Double line in Block section

Beyond LSS when block section is free - SM shall block forward and issue T 806 + Shunt Key Or T 806 with PN Or T 806 and will take "OFF" shunt signal below LSS if any.

Beyond LSS following a train- If SWR permits, then only shunting is to be performed beyond following a train. Authority T 806 without PN and as soon as train clears next block section SM shall block forward if shunting is not completed.

Shunting in rear block section -SM shall block back then T 806 + shunt Key or T 806 with PN shall be given to Loco pilot.

Q9.) Explain Securing of Vehicles at a station.

Securing of vehicles at a station.

1.Station staff shall ensure complete arrival of train and fouling mark clearance.

2. Hand brakes of brake van and six effective from rear and six effective from front wagons are to be applied.

3. If break van is not available hand brakes of nine wagons from front and nine wagons from rear are to be applied.

4. Wedges or skids are to be placed both sides to the last vehicles.

5. Safety chains are to be tied to both side last vehicles.

6. On completion of above works engine is to be detached by issuing T-806 memo to LP after taking signature of the guard.

7. After despatching the engine, points are to be set against blocked line clamped and pad locked.

8. Keys shall be kept under the custody of on duty SM.

9. LV board or red flag by day and tail lamp by night is to placed on both sides last vehicles on single line and rear side on double line.

10. Entries are to be entered in stabled load register and shall be signed by SM, Guard and Points man/Shunting Master

11. On completion of duty physically to be shown to the reliever the work done before leaving.

Q10.What is Marshalling? Briefly explain marshalling of mail/express trains and passengers trains.

Ans: Marshalling means an arrangement of vehicles in proper sequence to ensure safety, operationally convenience, to meet traffic requirements and shall give good appearance.

Marshalling of Mail/Express trains

1.Preferably all anti-telescopic or steel body coaches and SLR's are to be used.

2.If wooden body coaches are available a minimum of two anti-telescopic/steel body Coaches shall be given in side front and rear anti-telescopic/steel body SLR's

3.If there is no SLR in front an anti-telescopic/steel body coach shall be attached next to

engine kept empty and locked.
4.In rear of rear SLR a maximum of two(2) passenger coaches can be attached if required but both shall be anti-telescopic/steel body coaches.
5. In addition to two passenger coaches in rear of rear SLR and officer saloon can attach if necessary.

Passenger Train Marshalling.

1.A minimum of one anti-telescopic/steel body coach is to be marshalled on both sides Next to engine and inside rear SLR (anti-telescopic/steel body)
2.If sufficient no of anti-telescopic/steel body coaches are available a minimum of two shall be given on both sides as last coaches inside of SLR's.
3.For short distance trains working with in zone in rear of SLR three passenger coaches are permitted.
4.In rear of rear SLR two passenger coaches can be attached and also if required a officers saloon can be attached.

Q11. What is Marshalling? Explain Marshalling of Explosives and Dead engines?

Ans: Marshalling means an arrangement of vehicles in proper sequence to ensure safety, operationally convenience, to meet traffic requirements and shall give good appearance.

Marshalling of wagon containing Explosive.

1. Ten (10) permitted by goods train and (3) Three permitted by mixed train.
2.All shall be in one group.
3.When transported by mixed train shall be loaded in special type of wagons know as powdered wagons.
4.Shall be transported by mixed train only when no goods trains runs in the sections.
5. Guard wagons:
   (i) Steam engine – when attached next to engine 3 guard wagons.
   (ii) Diesel/Electrical engines – when attached next to engine 1 guard wagon.
   (iii) When transported by mixed trains 3 guard wagons shall separate passenger coaches from explosive wagons.
   (iv) Shall be separated by 3 guard wagons when dangerous goods or other Inflammable articles are transported by goods train having explosive wagons
   (v) Three guard wagons shall be given from brake van when attached next to BV.

Marshalling of Dead Engines.

1.Fit to run certificate is required from concerned authorities.
2.The MPS of dead engine shall not be less than MPS of Train.
3.The brakes of dead loco must be in good working condition when attached to a Goods train.
4. Permitted over sections where double/triple head is permitted.
5. Only one dead loco is permitted by a train.
6. Always it is to be attached next to engine only for passenger trains.
7.When attached to a passenger train the brake power should be 100% excluding dead engine.
8. Shall be escorted by competent person not less than Assistant Loco pilot when attached in rear or defect in under gear.
9. Can be attached to all trains except some super fast trains like Rajdhani, Shatabdhi,Doronto.

Q12.What is marshalling? Explain marshalling of SLR's.

Ans: Marshalling means an arrangement of vehicles in proper sequence to ensure safety, operationally convenience, to meet traffic requirements and shall give good appearance.

Marshalling of SLR's

1. In mail/Express trains ant-telescopic or steel bodies SLR's must be marshalled at both ends of the formation.
2. In the absence of front SLR's the coach next to engine must be kept empty and locked.
3. On Passenger train at least one anti-telescopic or steel body SLR's must be marshalled in rear of the train. If sufficient SLR's are available next to engine also one SLR to be provided.
4. If wooden body SLR is attached Mail/Express train it should marshalled in side two anti- telescopic or steel body coaches.
5. In case of short trains SLR whether anti-telescopic/steel body or not should be marshalled in the middle. For short trains in rear of SLR three passenger coaches are permitted.
6. The luggage and brake portion of front SLR shall be towards engine and in case of rear SLR shall be outside.

Q13.Write Short Notes to the following.

a. Marshalling of Saloons.

b. Causes for Brake Binding and how to Release.

c.Working of damaged/defective vehicles.

a. SALOONS MARSHALLINGS.

1. Not permitted by race specials, postal express trains and military special.
2. General Manager, Head of the departments and Commissioner of Railway Safety saloons may be attached to any train except above trains.
3. Head of the departments and DRM Saloons are to be attached to passenger, parcel and goods train.
4. If it is to be attached to a Mail/ Express train COM's permission is must.
5. Only one saloon is permitted by Mail/Express train.
6. Saloons of Divisional Officer and other Officer are to be attached to a passenger trains,parcel trains and goods trains only.
7. Can be attached to a light engine if fitted with vacuum/ air brake and tail lamp or LV is fixed.
8. Permitted within the prescribe load but one saloon is permitted in excess of prescribed load,but in VG actual load is to be mentioned.
9. Officers must give timely intimation for attaching their saloons to avoid detention to trains.
10. Officer are not permitted to take or send their saloons outside their jurisdiction without thepermission of their Head of the department and COM

b. Causes for Brake Binding and how to Release.

Causes forBrake Binding	How to Release
1) If the leakage of Air pressure on formation is Of 0.4 kg/cm^2 or more local application of brakes will take place.	1) Attend the leakages in the formation. Minimum BP pressure should be available in Engine is 5kg/cm^2 and in B/van 4.8kg/cm^2
2) On Multiple Engine operation If different pressures maintained by the two locos	2) Ensure the Manual release before starting the train if Multiple Engine operation
3) Leakage through Engine brake pipe while onRun.	3) Ensure there is no leakage from Engine Brake pipe
4) Hand brake/brakes in "ON" position.	4) Hand brake/brakes should be released and should bekept in "OFF" position
5) Empty Load devise handle kept in load position when wagon is in Empty	5) Empty load devise handle to be kept inload position when wagon gross load morethan

	42.5tons.
6) Empty Load handle is kept on load when Wagon is empty.	6) Release the wagon and handle is to be kept on empty side.

C.Working of damaged/defective vehicles:

1. For attaching to a train fit to run certificate is required issued by TXR/CCC.
2. Shall be attached in rear of brake van of a goods/mixed train.
3. Not permitted by passenger carrying trains.
4. Shall be moved only during day light hours.
5. Only one vehicle is permitted by each train.
6. Shall be escorted by mechanical department staff.
7. At sun set or when view ahead is not clear shall be detached at the first station and certificate is to be handed over to SM on duty.

Q14. Briefly explain Marshalling of Petrol Tanks.

Ans.MARSHALLING OF PETROL TANKS

Petroleum products are classified into three classes.

1. Class = 'A'
2. Class – 'B'
3. Class – 'C'

1. For all purpose empty tank wagons are to be treated as loaded tanks while Marshalling.
2. Any number of tank wagons are permitted according to section tonnage for all classes.
3. Always should be in one group
4. As for as possible should to be placed away from locomotive.
5. Class 'A' petrol tank wagons are to be transported by goods trains only.
6. Class 'A' petrol is permitted by mixed trains, if no goods train runs in that section.
7. Class 'B' and 'C' can be transported by goods/Mixed trains.
8. All classes of petrol tank wagons are not permitted by passenger carrying trains.
9. When transported by mixed train should be attached in rear of passenger portion.
10. Guard wagons

CLASS 'A'

Steam engine – 03 Guard wagons and Diesel/Electrical Engine – 01 Guard wag on
From engine
From passenger carriages
From Brake van
From other inflammable / Explosive

CLASS 'B'

Steam/Diesel/Electrical Engine – 01 Guard wag on
From engine
From passenger carriages
From Brake van
From other inflammable / Explosive

CLASS 'C'

No guard wagon is required.

11. If class A and B tank wagons are 8 Wheelers and Brake Van is also 8 wheelers than there is no need to attach guard wagon between Brake van and tank wagons

Q.15. Explain Reception of a train on Blocked Line/Obstructed Line.

Ans: Obstructed Line Admission

1. By taking "Off" calling on signal.
2. By giving T.509 memo to Loco Pilot.

Reception of a train on an obstructed line

1.If possible loco pilot is to be informed through rear Station Master.
2.Reception signals are to be kept in "On" position.

3.All points are to be correctly set and all facing points are to be locked. If required clamping and pad locking of points is also to be done.

4.Train is to be stopped at First Stop Signal than it is to be received.

a) By taking “Off” calling ON signal if provided or

b) By issuing T.509 memo and piloting.

5.Again stop the train at first facing point leading to obstructed line, than pass by showing hand signal.

6.Stop hand signal is to be exhibited continuously at 45 metres from the obstruction

7.Loco pilot shall keep his train well under control and be prepare to stop at danger hand signal.

8. Speed shall not exceed 15 KMPH throughout admission.

Q16. Explain Reception and Despatch of trains from un-signalled line.

Ans.Reception of a train on an Un-signalled line.

1.If possible inform Loco Pilot through rear Station Master.
2.Stop the train at First Stop Signal (FSS).
3.Ensure line free up to trailing point or up to the place where train is required to stop.
4.Set all the points correctly to the line of admission, clamp and pad lock them.
5.Close Level Crossing Gates if any supported by a private number.
6.Pilot the train from First Stop Signal by issuing T.509 memo on to the line.
7.Loco Pilot shall proceed cautiously with speed not exceeding 15 KMPH.

Un-signalled Line Despatch.

1.All points over which train is to despatched are to be correctly set, clamped and pad locked.

2. Station Master after obtaining line shall give authority to proceed to Loco Pilot.
3. If authority to proceed is not Tangible T.511 Starting Permit is to be given to Loco Pilot

Q.17 what are the Symptoms of Hot axle and seizure of roller bearings and how the train is to admitted.

Ans :<u>Symptoms of Hot axle.</u>

1. Burning oil smell
2.Smoke
3.Whistling sound
4.Flames

<u>Symptoms of Hot Box (seizure of roller bearings.)</u>

1. Splashing of grease.
2. Smell of burnt grease.
3. Decolourisation of paint.
4. Red Glow
5. Metallic sound
6. Skidding of wheels
7. Tilting of Trolley

1.Hot axle train is to be admitted on main line only.
2.If main line is not free or cannot be admitted because of any other problem can be admitted on loop line by stopping the train at First Stop Signal(FSS).
3.After receiving and stopping the train SM shall advise C&W staff if available.
4. If C&W staff gives fit certificate can be sent further, otherwise it is to be Detached and shall be kept on other line and secured.

Q.18. What is All Right Signal. How it is given. What are the things to be observed while exchanging All Right Signal.

Ans : All Right Signal exchange means the exchange between Loco Pilot and Guard to

ensure that the Guard is in his brake van and the train can proceed.

Also exchanged between Station staff/Gateman and Train crew to ensure that the train is running in a safe and proper manner or not.

1.Given by holding a green flag horizontally by day and by green light by night when train is running safe and proper manner at Station.

2.At Gate Gateman shows no signal by day and white light by night..

3.If any unusual is noticed on run through train Station staff/ Gateman shall exhibit danger hand signal (Day –Red Flag , Night – Red Light) immediately and try to stop the train.

4.If it is not possible to stop the train Station Master shall advise Loco Pilot through Gateman, TPC or through any other means and try to stop the train as early as possible.

5.Also inform Station Master in advance to stop the train and examine.

6.When train passing through a station SM shall give exchange from station side and points man from off side.

7.Shall be exchanged till engine passes Advance starter or Last Stop Signal.

While Exchanging All Right Signals the following things are to be observed

1. Fire on Train
2.Hot Axle
3..Flat Tyre
4.Hanging Parts
5.Loose/Slack couplings
6.Open Doors of Goods trains
7.Shifting of loads
8.Goods falling from Goods train
9.Leakage of Oil Tanks
10Brake binding
11Broken springs
12Shackle pin broken
13Master plates broken
14Any other things which endangers the safety of the train
15Lastly during day time LV board, night time Tail lamp and also Guard in BrakeVan

If LV board/Tail lamp is not available and Guard is not visible inform SM and Should not show Danger hand signal.

Q19.How many types of coupling are there and how to ensure proper coupling of IRS and CBC

Ans. TYPES OF COUPLINGS

1.IRSScrew Coupling. -- Used for BG Coaching stock.
2.CBC (Centre Buffer Coupling) (‘E’ TYPE) -- Used for BG Goods stock.
3.CBC (Centre Buffer Coupling) (‘H’ Type) -- Used at Some latest BG coaches. (Tight lock)
4.Semi Permanent Couplers -- Used at DHMU/EMU/DEMU Coaches. (Shako couplers)
5.Slack free couplers -- Used at BLC (Container) Wagons.
6.Transition Coupling -- Used at All Engines (‘E’ Type & ‘H’ Type)
7.ABC (Automatic Buffer Coupler) -- Used for MG coaching & Goods stock.

Ensure the following while coupling (IRS) Coaches.

1. Coupling has to be tightened fully. No slack coupling is permitted.
2. Tightness of the thread has to be uniform on both side of the turn buckle.
3. Slack coupling will lead to jerks on run and coupling may breaks and results to train Parting.

Ensure proper Locking of CBC Coupler ('E' type).

The locked position is indicated by the Toggle which should be clearly visible below the coupler head by minimum 19mm.

Ensure proper Locking of CBC Coupler ('H' type):

After coupling check the coach CBC and loco CBC is locked properly by

1) Clear Tell Tale Races
2) Lug of the Lock lift assembly should perpendicular or Inclined towards CBC
3) Yellow paint mark visible are indicates proper locking

Q20.Briefly Explain Air Brake System Working.

Ans.Working of Single Pipe/Twin Pipe Air Brake System.

Charging

1.With the help of the air compressor provided in the locomotiveatmospheric pressure is stored in Main Reservoir (MR) of locomotive.
2.From MR air flows through the limiting valve set and Brake Pipe (BP) is chargedtoa pressure of 5 kg/cm^2.
3.BP is connected to Distributor Valve(DV) through Dirt Collector (DC) by branch pipe.
4.The Control Reservoir (CR) & Auxiliary Reservoir (AR) is also charged with the help of DV to 5kg/cm^2
5.Brake Cylinder (BC) is connected to Exhaust.
6.**In twin pipe Air brake System** FP is connected to AR through DC and NRV (Non return valve) cum choke and is always charged AR with 6 kg/cm^2.

Application.

1.Whenever the driver requires to controlor stop the train a certain amount of air pressure in the BP is reduced by venting it to atmosphere from the DriversBrake Valve (DBV)
2. The reduction of BP pressure isolates AR is from BP and connects to BC (Brake Cylinder) from BC piston comes out and applies the brake.
3. The extent of brake application is proportional to the reduction of pressure in BP.

Release

1.Duringrelease the BP is recharged to 5 kg/cm^{2}by locomotive.
2. The recharging of pressure in BP isolates AR is from BC and BC is connects to exhaust and the brakes will be released by piston going to inside.

Manual release

1. When engine is cut off from the train or wagon/vehicle brakes will apply automatically Dueto reduce/venting of BP pressure.
2. When the train brakes are required to be released for some reasons it should be done by pulling Quick Release Valve (QRV) of DV.

Q21.Write Short Notes to the following.

a.Inspection Carriages

b. Brake Power Certificate

c. Alarm Chain Resetting

Ans. a. Inspection Carriages:

1. Inspection carriage whether anti-telescopic /steel bodied or not to be marshalled as operationally convenient.
2. Reserved bogies and saloons / Inspection carriages occupied by VIPs
   (i) Should be treated as any other passenger coach and marshalled accordingly
   (ii) If they are anti-telescopic /steel bodied coaches should be marshalled anywhere according to operational convenient.
   (iii) If they are wooden bodied they should be marshalled inside required number of anti-telescopic /steel bodied coaches

b. Brake Power Certificate (BPC)

1. Given by SE/JE (C&W)/Electrical after checking the formation.

2. Prepared in Triplicate and signed by SE/JE(C&W)/Electrical, Guard and Loco Pilot.
3. Possessed by Loco Pilot till destination.
4. Validity of BPC of coaching trains is 04(four) days or 3500 KMS.
5. **Validity of BPC of Goods trains.**
(i) Closed Circuit Rakes (CC) – 7500 KMS or 35 days (Air Brake)
(ii) Premium Rakes -- 12+03 days (Air Brake)
(iii) Non Closed Circuit Rakes -- from TXR point to loading station and from loading Station to destination station.
6.**BPC Colours.**
(i) CC Rakes - Yellow (Booklet)
(ii) Non CC Rakes - Green
(iii) Coaching - White
7. **BPC is invalid**
(i) If 10 or more units or more than 04 vehicles is attached or detached.
(ii) For Non CC rake destination point is not mentioned in BPC.
(iii) Overdue CC rake is not to be moved in the direction of Periodical Maintenance station.
(iv) CC rake moved to other zones not mentioned in the BPC.
(V) If Rake is stabled for more than 24 hours at one station.

C. Alarm Chain Resetting

1.A disc is provided on the top end of the coach for identifying on which coach alarm chain is pulled.
2.The normal position of alarm chain disc to be horizontal.
3.When alarm chain is pulled in the coach the disc of that coach will turn vertical and an hissing sound will come from that coach due to leakage of air pressure.
4.To reset the disc, it is to be turned to normal position. i.e. horizontal position by pulling the wire rope connected to it.
5.When the disc turned to normal position the hissing sound stops and brakes releases.
6.Even after resetting the disc the hissing sound doesn't stops, close the isolation cock provided below the coach.
7.If Alarm Chain Pull is isolated the same is to be informed to the passengers about the Dummying of the same.

Q22. Write Short Notes Of the following.

a. Collisions
b. Derailment
c. Averted Collisions
d. Serious Accident

Ans. a. Collisions

> Means impact of train against another train or vehicle.
> Includes head on collision, rear collision or side collision.
> Does not includes impact of wagon due to rough shunting without casualties and with negligible damage.
> Also excludes accidents at level crossing later.

b. Derailments

Means off loading of wheel/wheels from the track causing detention or damage to rolling Stock / permanent way

C.Averted Collisions

Means collision averted due to vigilance shown by a person/persons either outside Station limits or within station limits between trains or between a train and an Obstruction.

NOT TREATED AS AVERTED COLLISION:
OUTSIDE STATION LIMITS
If the distance between two trains or between a train and obstruction is 400 meters or more after stopping.
WITH IN STATION LIMITS
When train passes and stops or stops at an intervening fixed stop signal at danger andaverted collision.

e. Serious Accident

Accident to a passenger carrying train with

1.Loss of life
2.Grievous hurt
3.Damage to Railway properties above 2 cores
4.Any other accident which requires to hold enquiry by Commissioner of Railway Safety.

Q23. What are the salient features of 1967 Act of Hindi official language policy

Ans: As per the power vested by Article 343(3) the parliament of India has amended the Hindi official language policy Act in 1963 and brought into force as 1967 Amendment Act.

Salient features of 1967 Amendment Act.

1.English along with Hindi is to be used after expiry period of 15 years (i.e. after 25th January 1965)
2.Hindi and English both should be used for the following purpose in central Government offices. This is a statutory obligation.
i. General order, Memorandums, circulars, Notifications, Press communiqué
ii. Administrative and other reports
iii. Contracts, Agreements, Licenses, permits, Tender Notices and Tender forms

Q24.What are 1976 Rules of Hindi official language policy and what are the states which comes under A, B and C regions?

Ans: For progressive use and effective implementation of Hindi as official language Government of India framed official language Rules in 1976 known as “Hindi official language Rules 1976”

Under this rules the entire nation is divided into 3 regions known as A, B and C regions and an annual programme will be issued every year for each region separately for effective implementation of Hindi.

The States which come under A, B and C regions are

A Region States:- Bihar, Himachal Pradesh, Madhya Pradesh, Uttar Pradesh, Rajasthan, Haryana, Uttaranchal, Chhattisgarh, Jharkhand and Union Territory of Andaman & Nicobar Islands.
B Region States:- Gujarat, Punjab, Maharashtra, and Union Territory of Chandigarh
C Region:- All States and Union Territories which are not referred in region A & B

Q25. How many Zones are there are in Indian Railways. Write them Head Quarters.

Ans: There are 17 Zones and 1 Private Railway in Indian Railways.

S. No	Zones	Head Quarters
01	Northern Railway	New Delhi
02	Southern Railway	Chennai
03	Eastern Railway	Kolkata
04	Western Railway	Mumbai (BGTM)
05	Central Railway	Mumbai (CSTM)
06	North Eastern Railway	Gorakhpur
07	South Eastern Railway	Kolkata

08	North western Railway	Jaipur
09	South western Railway	Hubli
10	North Central Railway	Allahabad
11	South Central Railway	Secundrabad
12	East Central Railway	Hazipur
13	West Central Railway	Jabalpur
14	North Frontier Railway	Guwahati
15	South East Central Railway	Bilaspur
16	East Cost Railway	Bhubaneswar
17	Kolkata Metro Railway	Kolkata
18	Konkan Railway (Private Railway)	Navi Mumbai

Q26. What are the passengers amenities provided on major stations

Ans. Now-a-days passenger amenities are provided basing on Annual Income of a station. Categorized into seven A1, A, B, C, D, E & F

A1- Non suburban station with an annual earnings above 60 cores

A - Non suburban station with an annual earnings between 8 to 60 cores

B - Non suburban station with an annual earnings between 4 to 8 cores & Stations of tourist importance and important junction station (decided by GM)

C - All suburban stations

D - Non suburban stations with an annual income between 60 lakhs to 4 cores

E - Non suburban stations with an annual income of less than 60 lakhs

F - All halt stations

Major stations comes under “A” category.

Minimum/basic amenities to be provided at a Major station

1.Time table display
2.Booking facility - 15counters
3.Waiting hall
4.Seating arrangement - minimum 100 seats
5.Plant from shelter
6.Drinking water taps - 12 on each Platform
7.Water coolers
8.Urinals/latrines - 10 each
9.Lighting and fans - Adequate
10.Platform - High level
11.Clocks
12.Foot over bridges - As per requirement
13.Clock room facility
14.Book and other essential stalls
15.Refreshment room
16.Catering stalls
17.Washable Aprons with jet cleaning
18.Sign boards
19.Dust bins
20.Circulating and parking areas with lighting

Additional amenities

1.SPTM/UTS
2.Inter-active Voice Response System (IVRS)
3.Enquiry counter and computer announcement
4.National Trains Enquiry System (NTES)
5.Public address system
6.Train indicator board
7.Public phones and internet facilities

8.Water vending machines
9.Automatic vending machines
10.Touch screen NTES
11.Signage's (standardized)
12.Modular catering stalls
13.Pay and use toilets
14.Computerization of complaints
15.Retiring rooms
16.Waiting room with bathing facilities common and separate for upper and second class,separate for ladies and gents

Q27. How many states and union Territories are there in India.

Ans: There are 29+1(Delhi Special State) and 07 Union Territories.

S.No	Name of The State	S. No	Name of the State
01	Kerala	16	Jammu & Kashmir
02	Tamil Nadu	17	Uttaranchal
03	Karnataka	18	Madhya Pradesh
04	Telangana	19	Himachal Pradesh
05	Orissa	20	Andhra Pradesh
06	Maharashtra	21	Sikkim
07	Goa	22	Assam
08	Uttar Pradesh	23	Meghalaya
09	Chhattisgarh	24	Mizoram
10	Jharkhand	25	Manipur
11	Gujarat	26	Tripura
12	Rajasthan	27	Nagaland
13	Haryana	28	Arunachal Pradesh
14	Punjab	29	West Bengal
15	Bihar		

S.No	Union Territories
01	Andaman & Nicobar Islands
02	Lakshadweep Islands
03	Dadra& N. Haveli
04	Daman & Diu
05	Pondicherry
06	Chandigarh
07	National Capital Territory, Delhi

Q28. What is Isolation? What are the various methods of Isolation.

Ans: Isolation means separation of main line from other running lines and separation of running lines from Non – running lines to avoid side collusion due to rolling.

Methods of Isolation.

(1)Dead end/Buffer stops

An extended siding into a dead end or buffer stops which traps escaped vehicles Without fouling on other line or lines.

(2) Sand Hump

A short siding of approved design with a sharp raising gradient ends in a sand hump when vehicles escapes from the line traps in sand hump.

(3) Derailing switch

When it is open any vehicle passing over it, derails without fouling on other line.

(4) Hayes's Derail

When it is on rail any vehicle passing over it derails without obstructing other lines.

(5) Scotch Block:

It is a metal or wooden piece placed on rail a head of points and locked to prevent the movement of vehicles from the line on which it is stabled/standing.

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Objective bank for the post of shunting Master II GP Rs. 2400

1. Approved special instructions are issued or approved by _____. **(commissioner of Railway Safety (CRS))**
2. Special instructions are issued by _____. **(Authorized Officer)**
3. _____ is authorized officer of SC Railway. **(Chief Operations Manager (COM))**
4. _____ is the normal authority to proceed on single line token less section / double line. **(Taking off Last Stop Signal (LSS))**
5. On double line or On Single line when block instrument is defective _____ is given as ATP for the loco pilot. **(Paper Line Clear Ticket(PLCT)) (UP T/C 1425, DOWN T/D 1425)**
6. Under Absolute block system block stations are classified as _____. **(4 Types- A,B,C and Special class)**
7. Block overlap in MAS shall be _____ meters shall be reckoned from _____. **(180 meters from First Stop Signal (FSS))**
8. Signal overlap in MAS shall be _____ meters shall be reckoned on single line from _____ and on Double line from _____. **(120 meters, Trailing Points, Starter)**
9. The distance from Home Signal to BSLB shall be not less than _____ meters. **(180 meters)**
10. The maximum permissible speed permitted on standard II interlocking is_____. **(110 KMPH)**
11. The maximum permissible speed permitted on standard III interlocking is_____. **(140 KMPH)**
12. Isolation is necessary where trains are permitted to go above _____ KMPH at a station. **(50 KMPH)**
13. _____ is the best positive method of isolation.**(SandHump/Buffer stops)**
14. Point indicator shows _____ during day time and _____ during night time.**(White Target/Disc, White Light)**
15. Point indicator shows _____ by day and _____ by night when it is set to loop line. **(No Target, Green Light)**
16. Trap indicator shows _____ during day and _____ during night when it is open.**(Red Target/ Disc, Red Light)**
17. Trap indicator shows _____ during day and _____ during night when it is set.**(Knife edge/ Green Disc, Green Light)**
18. Station section is available only in _____ station.**("B" Class)**
19. Sub rules are framed by _____**(Authorized Officer)**
20. General rules are framed or amended by _____**(Railway Board)**
21. Wind velocity measured by _____**(Anemometer)**
22. No railway servant directly connected with working of trains shall not take or use any alcoholic drink within _____ hours before the commencement of his duty.**(08 hours)**
23. If train parting is observed by any railway servant _____ hand signal shall not be exhibited. **(Danger/Stop)**

24. At non interlocked station the speed of the train on main line shall not exceed _____ KMPH**(15 KMPH)**
25. Block forward and block back is permitted only on _____. **(Double Line Stations)**
26. A train which started proper ATP and has not completed his journey is called _____.**(Running Train)**
27. A fixed stop signal of a station controlling entry of trains in to next block section is called _____.**(Last Stop Signal (LSS))**
28. As per G&SR the signals which control the movement of trains are _____. **(03 types- Hand Signals, Fixed Signals and Detonator Signals)**
29. Double distance signal is compulsory when the speed of the train is _____. **(above 110 KMPH)**
30. At class 'B' single line section with MAS the distance from Home signal and outer most facing points shall not be _____ meters.**(300)**
31. Starter signal protects _____**(Points)**
32. Advance starter protects _____**(Block section)**
33. Advance starter OFF position is inter locked with _____ **(Block instrument)**
34. Except automatic stop signal all other fixed signals normal aspect is _____.**(Most Restricted Aspect/Danger (Red))**
35. Normal aspect of automatic stop signal is _____.**(Proceed/Green)**
36. Automatic stop signal is distinguished by _____.**("A" Marker Board)**
37. Semi automatic signal is distinguished by _____.**(Illuminated "A" Marker)**
38. _____is the authority to pass advance starter in automatic section becomes defective.**(T.369 (3b) and caution order (10 KMPH))**
39. In coloUr light section Calling-ON signal is identified by _____**("C" Marker Board)**
40. Calling-ON signal is to be provided below _____ signal except _____ signal**. (Stop Signal, Last Stop Signal (LSS))**
41. Calling-ON signal shows _____light in its ON position.**(No)**
42. Calling-ON signal shows _____ light in its OFF position.**(MiniatureYellow Light)**
43. Calling-ON signal is used for _____.**(Admitting a Train onobstructed line and during signal failure)**
44. Shunt signal protects _____.**(Points)**
45. Shunt signal can be placed _____ or below _____ except _____.**(Independent, Stop Signal, First Stop Signal (FSS))**
46. When shunt signal becomes defective _____ is the authority to be given to loco pilot / shunter.**(T.369 (3b) and proceedHand Signal at the foot of Defective Signal)**
47. When shunt signal is provided below a stop signal it gives _____ information in its ON position.**(No Information/ Aspect)**
48. When shunting permitted indicator (SPI) becomes defective _____ authority is to be given to loco pilot / shunter.
(T.369 (3b) and proceedHand Signal at the foot of Defective SPI)
49. When shunt signal is provided below a stop signal it shows _____ light in its ON position.**(No Light)**
50. There are_____ type of shunt signals. They are _____.**(Three Types - Disc type, Position Light type, Miniature Semaphore Arm type)**
51. Detailed working instructions about shunting permitted indicator are available in _____.**(Station Working Rules (SWR))**
52. Shunting order number is _____.**(T.806)**
53. Divisional Caution order No. _____.**(T.409)**
54. When Shunt signal becomes defective the Points are to be treated as _____.**(Non Interlocked/Defective)**

55. When Shunt signal becomes defective the concerned points are to be _____, _____ and _____ before authorizing any movement over them? **(Set, Clamped and Padlock)**
56. All Non- interlocked points are to be correctly _____ and _____ or _____ before authorizing movement over them.**(Set, Clamped and Padlocked or by Cotter bolt locked)**
57. Maximum permissible speed for shunting is _____.**(15 KMPH)**
58. Shunting speed for Roller bearing stock one wagon _____ more than one wagon _____.**(05 KMPH, 02 or 03 KMPH)**
59. Shunting speed for explosives _____.**(08 KMPH)**
60. Shunting speed for coaching stock _____.**(08 KMPH)**
61. Shunting speed for Oil tanker _____. **(08 KMPH)**
62. _____ Type of shunting is only permitted for Oil tanker, Explosives and Other dangerous Goods wagons. **(Flat/Push and Pull)**
63. When a Light Engine is to be moved over a blocked Passenger train occupied line _____ shall accompany Light Engine and _____ is to be informed about the same.**(Points man, Locopilot/Shunter)**
64. While attaching Engine with or without coaches to Passenger occupied train the Engine is to be stopped _____ away from the train before coupling. **(20 meters)**
65. _____ Coaches and _____ can be attached in rear of Passenger/Mail/Express train.**(Two Slip Coaches (Anti Telescopic), OfficersSaloon/ Inspection Carriage)**
66. For a short train with in Zone _____ number of Passenger coaches can be attached in rear of SLR.**(Three)**
67. The rules laid down in the I.R.C.A., _____ in regard to marshalling of explosives and other dangerous goods should be rigidly complied. **(Red Tariff-20)**
68. Maximum number of wagons containing explosives permitted by goods trains is _____ and _____ by mixed train. **(Ten, Three)**
69. Minimum _____ number of wagons is to be given as support wagons from Loco when wagons containing explosives are attached by Goods train. **(Steam Loco-03,Diesel/Electrical-01)**
70. Minimum _____ number of wagons is required to be given as support wagons from Brake van/Passenger coaches/other inflammables when explosives are carried by a train. **(Three)**
71. Class 'B' POL product when carried, minimum number of _____ wagons is given as support wagon from loco and Brake-Van.**(one)**
72. For the purpose of marshalling the empty Oil tanks also shall be treated _____ tank wagons. **(Loaded)**
73. Tank wagons containing petroleum and other inflammable liquids and _____ should not to be carried together.**(Oxygen/ Liquid Air)**
74. A single four wheeler must not be marshaled between two _____.**(Eight wheelers)**
75. To attach a dead engine to a train, a certificate fit to run issued by Section Engineer/ _____ /Power controller is required.**(Loco Inspector)**
76. Dead Engine shall be escorted by competent railway servant not lower than _____when attached in rear or Under Gear Defect **(Assistant Loco Pilot)**
77. _____ number of dead engines is/are permitted to be attached to passenger carrying train. **(one)**
78. No dead engine should be attached to _____ trains under any circumstances. **(Rajdhani, Shatabdhi, Duranto)**
79. Officers Saloons/Inspection carriages are not be permitted by (a) _____ (b) _____ (c) _____ trains.**(Race Specials, Military specials,Postal specials)**
80. More than one Inspection carriage is not permitted by _____ trains.

(Mail/Express Trains)

81. _____ can be attached in excess of the permitted load. **(A Saloon)**
82. A Mail/Express trains shall have at least one _____ after loco and as rearmost vehicle. **(SLR)**
83. In rear of rear SLR _____ coaches can be attached excluding one Inspection carriage for express trains.**(Two- Anti Telescopic/steelbody)**
84. In case of short trains running with single SLR, the SLRshould be marshaled in the _____ of the formation.**(middle)**
85. When center SLR is provided in short trains, a maximum of _____ coaches are permitted on either side of SLR.**(Three)**
86. On double line section, shunting within the station section can be _____ when line clear is granted for a train.**(performed)**
87. On double line, to perform shunting beyond LSS, SM shall do _____ and give_____ written authority.**(Blockforward, T.806 with Private Number)**
88. On double line, when shunting is permitted beyond LSS in SWR in rear of a travelling away train, the authority is _____.**(Taking offShunt Signal if any or T.806 without Private Number)**
89. On single line token less section, to perform shunting beyond LSS and up to FSS, the authority is _____.**(Shunt Key or T.806)**
90. On double line, to perform shunting beyond outer most facing points/BSLB, the authority is _____. **(Block back, T.806 with Private Number)**
91. To shunt beyond the FSS on single line sections, the movement should be treated like a _____ movement and LP shall be given _____+ a memo to push back.**(Train Movement, Authority-Relevant Departure Signals can be taken off)**
92. SWR consists of _____ pares and _____ appendices.**(Twelve, Eight)**
93. Para 8 of SWR deals with the topic _____. **(Shunting)**
94. Information regarding System and means of working is available in the _____ of SWR.**(Para three)**
95. Working of Level Crossing Gates are given in the Appendix ____ of SWR.**('A')**
96. Duties of train passing staff and staff in each shift are given in the Appendix _____of SWR.**('D')**
97. Appendix 'E' of SWR deals with _____.**(EssentialEquipment)**
98. The general precautions to be observed by stations staff at OHE worked station is depicted in Appendix _____ of SWR.**('G')**
99. Out laying siding points are indicated by _____ board.**('S' marker)**
100. Detailed working instructions of out laying siding is incorporated in _____**(Station Working Rules (SWR))**
101. Normal setting of points shall be always for _____**(MainLine/Straight Line)**
102. _____, _____ and _____ signal shall not be used for shunting purpose.**(Outer, Home, Last Stop Signal (LSS))**
103. Shunting is Controlled by _____ ,_____ and _____.**(Hand signals, Fixed Signals, Verbal Instructions)**
104. Normal aspect of distance signal is _____**(Caution)**
105. The speed of the goods train while entering goods terminal yard is restricted to _____ KMPH**(Fifteen) (15)**
106. When signals is newly elected or shifted. Caution order shall be given for a period of _____ days.**(Ten)**
107. The speed of the train on 1 in 8½ turn out is _____ KMPH**(Goods – 15 KMPH, Passenger – 10 KMPH)**

108. ODC shall be allowed to be attached by a train for transport only with the prior sanction of _____.**(Chief Operations Manager COM)**
109. Speed of class 'C' ODC by day _____ KMPH**(BG – 25 KMPH, MG – 15 KMPH)**
110. When class 'C' ODC is attached by a train _____, _____ and _____ shall proceed as escort.**(TI, SSEs(P .Way , C&W,S&T, OHE)**
111. ODC wagon trains as far as possible to be received on _____ line**(main)**
112. Speed of class 'B' ODC on BG shall not exceed _____ KMPH**(40 KMPH)**
113. Side lights are dispensed for _____ and _____ trains**(Goods and Suburban)**
114. In emergency a goods train without brake van or without guard is ordered by _____.**(Sr.DOM/DOM head of the Division)**
115. When hot axle reported by rear SM the train shall preferably be admitted on _____ line.**(Main Line)**
116. _____ number of damaged vehicles are permitted to be attached in rear of brake van during _____only.**(One, during Day time)**
117. Fresh BPC is required when ever _____ number of vehicles are attached or detached**(10 units or 4 vehicles)**
118. When non CC rake is stabled for more than _____ hours fresh BPC is required.**(24 hours)**
119. Premium rake BPC is valued for _____days**(12+ 3 days)**
120. Closed circuit rake BPC is valued for _____ or_____ whichever earlier.**(7500 KMS or 35 days)**
121. Material train BPC is valued for _____ days subject to its revaluation once in _____ days by C&W staff.**(30 days, once in a week)**
122. When two Distant signals are provided Distant Signal located at _____metersfrom Home Signal **(2000)**
123. _____ Board is dispensed when two Distant Signals are provided. **(Signal warning Board)**
124. When two Distant Signals are provided distant signal gives ___ Aspects.**(Two Aspects – Attention & Proceed)**
125. When Double Distant signals are provided Distant signals shows_____light in 'ON' position**(Double yellow)**
126. During thick and foggy weather when double distant signals are provided _____ is not required **(Fog protection is not required)**
127. Home signal is a _____ Signal **(Stop Signal)**
128. For admitting a train on un signaled line _____ memo is given to Loco Pilot**(T-509)**
129. Long-Short, Long-Short (__ 0 ___ 0) whistle code means _____ **(Train arrived incomplete or Train parting)**
130. Two Short one Long (00 _____) whistle code means _____**(insufficient Air pressure/Vacuum or Alarm Chain pulling)**
131. Three long whistles (_____ , _____ , _____) means _____**(front fouling mark not cleared)**
132. One long two short whistle (___ 00) means _____ **(signal defective)**
133. Two long sirens means _____**(Accident takes place in Loco Shed OR Traffic Yard adjoining loco shed)**
134. Three long sirens means _____**(Accident takes place at an out station but main line is clear – Accident Relief Train (ART) to be moved)**
135. Three long one Short sirens means _____**(Accident takesplace at out station but main line is clear – Medical Relief Train (MRT) and Accident Relief Train (ART) is to be moved)**
136. Four long sirens means _____**(Accident takes place at an out station and main line is blocked - AccidentRelief Train (ART) to be moved)**

137. Four long one short sirens means _____**(Accident takes place at an out station and main line is blocked-Medical Relief Train (MRT) and Accident Relief Train (ART) is to be moved)**
138. Mock drills shall be conducted once in _____ months **(03 Months)**
139. ART shall be turned out within _____ minutes during day and within _____ minutes during night time **(30 Minutes by day & 45 Minutes by night for Hyderabad Division)**
140. MRT shall be turned out within _____ minutes with a direct dispatch facility andwithin _____ minutes without direct dispatch facility.
(15 minutes for direct dispatch and 20 minutes for indirect dispatch during day/night for Hyderabad Division)
141. ART means _____**(Accident Relief Train)**
142. MRT means _____**(Medical Relief Train)**
143. A Goods train with 56 wagons, BP Pressure in engine _____ and in Brake Van _____. **(5kg/cm^2 , 4.8kg/cm^2)**
144. A Goods train with 57 wagons, BP Pressure in engine _____ and in Brake Van _____. **(5kg/cm^2 , 4.7kg/cm^2)**
145. Reduction of BP pressure causes _____**(Brake Application)**
146. Creation of BP pressure causes _____**(Brake Release)**
147. Break Power for Mail/Express train at originating station shall be _____ percentage and enroute shall be _____ percentage.**(100% and 90%)**
148. Break power for goods train with Air brake Non- CC shall be _____ at originating station. **(85%)**
149. POH means _____**(Periodic Over Hauling)**
150. IOH means _____**(Intermediate Over Hauling)**
151. POH of Super FastTrains/Mail/express Trains shall be done once in ____ _____ months**(18 Months)**
152. POH of passenger trains shall be done once in _____. **(18 months)**
153. All cutout angles must be in _____ positions except front side of loco and rear side of last vehicles to ensure _____. **(Open, Air Continuity)**
154. Empty/ load handle shall be kept in load position when the gross load is above _____ tons.**(42.5)**
155. DV isolating handle in vertical position indicates DV is in _____ position.**(Working)**
156. DV isolating handle in horizontal position indicates DV is in _____ position.**(Isolated/Not Working)**
157. All _____trains shall have twin pipe working.**(Passenger Carrying)**
158. While at station the loco pilot has to obey the orders of _____. **(Station Master)**
159. Material train shall be ordered during _____ time only.**(Day)**
160. Material train shall be ordered to work during night in emergencies with the permission of _____**(Division Railway Manager (DRM))**
161. Required brake power of material train shall be _____. **(not less than 90%)**
162. While reversing passenger carrying train loco or during power interception before detaching loco hand brakes of _____ are to be applied and _____ are to be placed on both sides. **(Second class, Luggage cum Brake Van (SLR) and wedges/skids)**
163. While performing shunting of wagons containing explosives the shunting is to be supervised by _____ **(Station Master)**
164. While backing full train from one line to another line via main line the shunting supervision is to be done by _____. **(Station Master)**
165. To receive a train on obstructed line _____ signal is to be used or _____ memo is given to the loco pilot. **(Calling-On or T.509)**

166. To dispatch a train from unsignaled line in token less section _____ authority is to be given to the loco pilot. **(T.511)**
167. _____ gradient is considered as dangerous for shunting roller bearing wagons and _____ gradient for non roller bearing wagons. **(1 in 400, 1 in 260)**
168. In case of fire accident in passenger carrying train the first objective to be achieved is _____.**(To save the lives of passengers, property and Isolate the coach/coaches from other coaches)**
169. Shunting in the face of approaching train is _____. **(Prohibited)**
170. Neutral section lies between _____ **(Two consecutive Sub stations)**
171. During power block _____ trains are permitted to run. **(Diesel)**
172. Dangerzone means the zone lying within _____ meters of any live equipment. **(05 meters)**
173. Any irregularity noticed shall be reported to _____ in electrified section. **(Traction Controller)**
174. Dead engine is always to be attached next to _____ **(Working Engine)**
175. When railway property damaged exceeds _____ is treated as serious accident. **(02 cores)**
176. Outside station limits when the distance between two trains more than _____ meters is not treated as averted collision **(400 meters)**
177. Passing stop signal at danger is a _____ type of accident. **(Indicative Accident)**

Expand the Following.

178. BCNHL means _____**(Bogie Covered Pneumatic High Load)**
179. BFR means _____**(Bogie Flat Wagon Rails)**
180. BRH means_____**(Bogie Flat Open Wagon with Air Brake)**
181. BOBR means _____**(Bogie Hopper wagon with Rapid Discharge)**
182. BV means_____**(Brake Van)**
183. BCN means_____**(All Welded Covered Bogie Wagon with Center Buffer Coupling (CBC) Air Brake)**
184. BCX means _____ (**All Welded Covered Bogie)**
185. BTPGN means_____**(Bogie tank wagon LPG with Air Brake)**
186. BOY means_____**(Bogie Open Ore Wagon)**
187. BRN means_____**(Bogie Flatopen wagon with Air Brake)**
188. BFK means_____**(Bogie Container Wagon)**
189. AC coach means_____**(Air Condition)**
190. CZ coach means_____ **(Chair Car)**
191. CW coach means _____ **(2 tier Sleeper)**
192. SLR means _____**(Second Class Luggage cum Brake Van)**
193. WGSCN coach means_____**(Vestibule Self Generating Second Class Three Tier Sleeper)**
194. WGACCN coach means _____**(Vestibule Self Generating Air Condition Three Tier Sleeper)**
195. CTR means _____**(Combined Train Report)**
196. VG means _____**(Vehicle Guidance)**
197. ODC means _____**(Over Dimensional Consignment)**
198. SCOR means _____**(Section Controller)**
199. CHC means_____**(Chief Controller)**
200. CTO means _____**(Control Office)**
201. SMR means _____**(Station Manager)**
202. FOIS means _____**(Freight Operations Information System)**
203. COIS means _____**(Coaching Operations Information System)**

204. CRIS means _____**(Centre for Railway Information System)**
205. RA coach means _____**(Saloon)**

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General knowledge

1.First Train in India started between _____ and _____on _____ **(Mumbai and Thane on 16th April 1853)**
2. Railway Minister _____**(Mr.Suresh Prabhu)**
3. Ministers of state for Railways _____**(Mr.Manoj Sinha)**
4. President of India _____**(Mr.PranabMukerjee)**
5. Prime minister of India _____**(Mr.NarendraModi)**
6. Speaker of Lok Shaba _____**(Mrs .SumitraMahajan)**
7.Chief Minister of Telangana_____**(Mr.K.ChandraShekharRao)**
8.Chairman Railway board _____**(Mr.A.K.Mittal)**
9.Member Traffic _____**(Mr.AjayShukla)**
10.Railway board Head quarters _____**(New Delhi)**
11.GM of SC Railway _____**(Mr.P.K.Saxena)**
12.COM of SC Railway _____**(Mr.J.N.Jha)**
13.CFTM of SC Railway _____**(Mr.K.R.K.Reddy)**
14.CPTM of SC Railway _____ **(Mr. Siva Prasad)**
15. CTPM of SC Railway _____**(Mr.G.John Prasad)**
16.CTM (G) & PP of SC Railway _____**(Mrs.K.Padmaja)**
17. CSO of SC Railway _____**(Mr.Sahu)**
18.CCRS Head quarters _____**(Lucknow)**
19.RDSO Head quarters _____**(Lucknow)**
20.National bird of India _____**(Peacock)**
21.National animal of India _____**(Tiger)**
22.National flower of India _____**(Lotus)**
23.Capital of India _____**(New Delhi)**
24. Capital of Telangana_____**(Hyderabad)**
25.National Anthem of India _____**(Jana GanaMana)**
26.National song of India _____**(VandeMatram)**
27.National flag of India was designed by _____**(PingaliVenkaiah)**
28.CRS of SC Railway_____**(Sri. D.K.Singh)**
29.DRM of SC Division _____. **(Mr.Ashesh Agarwal)**
30.Sr. DOM of SC Division _____. **(Mr.G.Ravi Kumar)**
31.Sr. DSO of SC Division _____ **(Mr.S.V.VaraPrasad)**
32.Sr. DPO of SC Division _____**(Mr.J.P.Kusumakar)**
33.DOM(G) of SC Division _____**(Mr.G.Kumar)**

34.Badrachalam Station is located on the banks of _____ river.**(Godavari)**
35.Manchirayalon is located on the banks of _____river.**(Godavari)**
36._____ temple is located nearBadrachalam Station.**(Lord Sri Rama)**
37. _____temple is located nearParli-Vaijanath Station.**(Lord Shiva)**
38._____Station of SC Division is considered as historical monument.**(Secunderabad)**
39. There are _____ states and_____ union territories in India.
(29 states, 07 union territories)
40. There are _____numbers of Zones and ____number of production units in Indian railways **(17 zones and 07 production units)**