QUESTION BANK FOR 15 % LDCE GOODS GUARDS SELECTION - 2015

Q.1. Differentiate between
a) Warner and Distant signal
b) Calling on signal and shunt signal
c) Point indicator and trap indicator
d) Block station and non block station.

a)	WARNER	DISTANT
1.	Provided in TAS section only	Generally provided in MAS section
2.	In A &C class stations compulsory. In B class when the speed is above 50 KMPH over facing points.	In MAS section it is compulsory.
3.	Tells about next block section.	Tells about next stop signal.
4.	Generally provided below FSs or LSS and sometimes independently also	Always provided independently except some times combined with gate signal or LSS
5.	Some times non working also	Always working only
6.	Gives two aspect caution and proceed	Gives three aspects cautions, Attention, Proceed.
7.	When placed in rear of FSS. It should not less than 400 mtrs	Placed in rear of FSs at a distance of not less than 1000 mtrs or 1 Kms.
8.	Interlocked with block instrument	Interlocked with stop signal to which it refer
9.	Does not indicate the driver whether the train is received on straight line or turn out.	Indicates the driver whether the train is received on straight line or turn out.
10.	In its 'OFF' position it indicates the driver that the train is going through via Main line.	In its 'OFF' position it indicates the driver whether loop line Home signal is taken off or Main line Home signal.
11	When independent a fixed green light is provided 1.5 to 2 meters above	When independent no fixed green light is provided above.
12.	In colour light when provided independent only "P' marker board is provided.	In colour light it will have a "P" marker board.
b)	CALLING ON SIGNAL	SHUNT SIGNAL
1.	Provided below all stop signal except LSS	Provided independently or below stop signal except FSS
2.	Two types – 1) Miniature Semaphore Arm type 2) Colour lights.	Three types – 1) Miniature Semaphore Arm type. 2) Disc type 3) Position light type
3.	Miniatures Semaphore arm type painted white in colour with red band.	Miniatures Semaphore arm type painted white in colour with white band.
4.	Will have "C" marker board	Position light in a box three white lights is provided in a box one above and two below. White disc with red band.
5.	Used for admitting train on obstructed line when signal becomes defective during track circuit failure.	Used for shunting purpose only.
6.	"On" position no indication.	'ON' position gives stop indication when provided independently.
7.	"OFF" position indicates proceed	"OFF" position indicates proceed with a speed not

	cautiously with a speed not exceeding 30 KMPH and be prepared to stop short of any obstructions.	exceeding 15KMPH for shunting purpose only.
c)	POINT INDICATOR	TRAP INDICATOR.
1.	It indicates the position in which the points are set.	It indicates the position of derailing switch
2.	It is provided where there are not departure signals or where signal are Home is provided	It is provided at derailing switch where there is no signal protection.
3.	Points indicators shall show a white target by day and white light by night in both directions where points are set for straight line.	Trap indicator shall show red target by day and red light by night in both directions when the derailing switch is open.
4.	Point indicator shall show no target by day or a green light by night in both direction when points set for the turn out	Trap indicators shall show a knife edge of the disc by day and green light by night in both directions when the derailing switch is close.
d)	BLOCK STATION	NON-BLOCK STATION
1.	Block stations are provided with signals	Non-block stations are not provided with signals.
2.	Operating staff such as ASM, Points men are compulsory.	Not compulsory.
3.	Authority proceed is to be given to the driver of a train under the system of working for entering into the block section.	Authority proceed is not required. Trains are stopped and started according to the working timetable with the all right signals exchanging between the driver and guard.
4.	Block stations are of three types. i) A ii) B iii) C	Non-block stations are also called as D class station and Halt station.

Q. 2. How trains will be worked in the following cases.
a) Home signal defective
b) Starter and Adv. Starter Defective
c) Gate signal at ON
d) Automatic signal at ON.

a) Home signal Defective.

There are four methods for receiving the train when Home signal becomes defective, they are:
(1) Calling “ON” method (2) Pre- Warning Method (3) T.369 (3b) Method (4) Telephonic Method.

Calling “ON” Method:
1. Line is to be kept free up to Trailing points
2. All the points are to be correctly set to the admission line.
3. Train is to be stopped at signals before taking “OFF” Calling “ON” signal.

Pre-Warning Method:
1. Station Master gives Pre-warning message to Notice station and Rear station Masters.
2. Notice SM or Rear SM gives Pre-warning Memo T 369 (1)
3. Line is to be kept free up to Advance starter or shunting limit board.
4. All points are to be correctly set clamped and pad locked in the presence of Station Master

5. Points man shall go in uniform to the Home signal
6. While going if any LC gates are to be closed.
7. Standing at the foot of defective Home signal, proceed Hand signal (PHS) is to be exhibited to the approaching.

T.369 (3b) Methods

1. Line is to b e kept free upto Trailing points.
2. All the points are to be correctly set clamped and pad locked in the presence of Station Master.
3. Points shall go T. 369 (3b) Memo to Home signal
4. While going if any LC gates are to be closed.
5. After stopping the train at Home signal T 369 (3b) is tobe handed over to the Driver.
6. Proceed Hand signal shall be exhibited standing at the foot of defective Home signal.

b) Starter Defective.

There are two methods for dispatching the train when starter becomes defective. They are: (1) Calling “ON” Method. (2) T 369 (3b) Methods.

Calling “ON Method: If calling on signal is provided below starter signal train is to be stopped at the signal and then calling “ON signal is to be taken “OFF”

T369 (3b) Method.:

1. All points are to be set correctly clamped and pad locked in the presence of Stationmaster.
2. Points man shall take T 369 (3b) from Station Master and Hand over to Driver.
3. Proceed hand signal to be exhibited at the foot of defective starter.

<u>Advance starter Defective.</u>

1. On double Line	-	PLCT to be given.
2. On signal line token less section	-	PLCT To be given
3. On signal lie token section.		
When token extracted	-	Token & T 369 (3b)
When token not extracted.		
PLCT -		Paper line clear ticket. Down direction PLCT No. T/B 1425 Up direction PLCT No. T/C 1425

c) Gate stop signal is at ON

1. Drivers shall given continuous whistle and stop the train at the signal.
2. If the gate signal is provided with ‘G’ marker:
   a) Wait 1 minute by day and 2 minutes by night give a long whistle, exchange signals with guard, draw ahead cautiously and stop short of level crossing.
   b) Pass the gate on the hand signal exhibited by the Gateman
   c) If gateman is not available, pass the gate on the hand signals of the Asst. driver or guard who will do so after ensuring that the gate is closed and locked against road traffic.
   d) After passing the gate, stop at two-vehicle length from level crossing gate and arrange to open the gate for road traffic.

3. If gatemen is not found, stop the train out of course at next station and report the matter to SM.
4. If gate signal is not provided with 'G' marker, the train shall be stopped and dealt as per the special instructions.

Q.3. Duties of Driver and Guard when an Automatic Stop signal on double line is to be passed at 'on'. —

(1) When a Driver finds an Automatic Stop signal with an `A` maker at `on`, he shall bring his train to a stop in the rear of the signal. After bringing his train to a stop in the rear of the signal. The Driver shall wait there for one minute by day and two minutes by night. If after waiting for this period, the signal continues to remain at `on`, he shall give the prescribed code of whistle and exchange signals with the Guard and then proceed ahead, as far as the line is clear, towards the next Stop signal in advance exercising great caution so as to stop short of any obstruction.

(2) The Guard shall show a Stop hand signal towards the rear when the train has been so stopped at an Automatic Stop signal, except as provided for in sub-rule (4)

(3) Where owing to the curvature of the line, fog, rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the Driver shall proceed at a very slow speed, which shall under no circumstances exceed 8 kilometers an hour. Under these circumstances, the Driver, when not accompanied by a Fireman or an Assistant Driver, and if he considers necessary, may seek the assistance of the Guard by giving the prescribed code of whistle

(4) When so sent for by the Driver, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Driver in keeping a sharp lookout.

(5) When an Automatic Stop signal has been passed at 'on', the Driver shall proceed with great caution until the next Stop signal is reached. Even if this signal is 'off', the Driver shall continue to look out for any possible obstruction short of the same. He shall proceed cautiously up to that signal and shall act upon its indication only after he has reached it.
S.R. 9.02 1. The 'on' position of an Automatic Stop signal may be due to the presence of a train in the Automatic Signaling section ahead or due to an obstruction on the track or a broken or a displaced rail or any other cause.

1. When a Driver passes an Automatic Stop signal at 'on' he shall proceed at a speed not exceeding 10 KMPH to enable him to stop short of any obstruction. He shall continue to drive cautiously at this speed until he passes the next Stop signal. The speed shall be further restricted to 8 KMPH during poor visibility due to curvature of the line, fog, dust-storm, engine working the train pushing it or any other cause.

2. When it becomes necessary to stop a train in rear of an Automatic Stop signal at 'on' it shall be brought to a stop as close as possible in rear of that Automatic Stop signal so as to provide the maximum possible margin for the Driver of a following train, driven cautiously, to stop clear of the train ahead.

3. The indication of an Automatic Stop signal applies only to the track beyond the signal and there is a possibility of a train standing in rear of the signal while it is showing `off` A Driver having passed an Automatic Stop signal at 'on' shall not, therefore, act on the indication of the signal ahead until he has actually reached it.

4. Distance between two trains in Automatic signaling territories after passing an Automatic Stop signal at 'on'-

After passing an Automatic Stop signal at 'on', the Driver of the following train hauled by any locomotive, shall ensure that a minimum distance of 150 meters or two clear OHE spans (on electrified sections) is maintained between his train and the preceding train or any obstruction on the line.

However, the above distance may be reduced to 75 meters or one clear OHE span in case of EMU train following. In special circumstances like floods etc., the following train may be pulled closer to the preceding train or the obstruction.

5. After passing an Automatic Stop signal at 'on', the Guard of a train shall watch that the Driver does not exceed the speed prescribed in para 1. If the Driver exceeds the speed prescribed, the Guard shall take action as per G.R. 4.45.

Duties of Driver and Guard when an Automatic Stop signal on single line is to be passed at 'on'.

(1) When a Driver finds an Automatic Stop signal with an 'A' marker at 'on', he shall bring his train to a stop in rear of that signal and wait there for one minute by day and two minutes by night.

(2) If after waiting for this period the signal continues to remain at 'on', and if telephone communication is provided near the signal, the Driver shall contact the Station Master of the next block station or the Centralized Traffic Control Operator of the section where Centralized Traffic Control is provided, and obtain his instructions. The Station Master or the Centralized Traffic Control Operator, as the case may be, shall, after ascertaining that there is no train ahead up to the next signal and that it is otherwise safe for the Driver to proceed so far as is known, give permission to the Driver to pass the signal in the 'on' position and proceed up to the next signal, as may be provided under special instructions.

(3) If no telephone communication is provided near the signal or if the telephone communication provided near the signal is out of order and cannot be made use of, the Driver shall give the prescribed code of whistle and exchange signals with the Guard and then proceed past the signal as far as the line is clear, up to the next Stop signal in advance, exercising great caution so as to stop short of any obstruction.

(4) The Guard shall show a Stop hand signal towards the rear when the train has been so stopped at an Automatic Stop signal, except as provided for under sub-rule (6)

(5) Where owing to the curvature of the line, fog, rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the Driver shall proceed at a very slow speed, which shall under no circumstances exceed 8 kilometers an hour. Under these circumstances, the Driver when not accompanied by a Fireman or Assistant Driver, and if he considers it necessary, may seek the assistance of the Guard by giving the prescribed code of whistle.

(6) When so sent for by the Driver, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Driver in keeping a sharp lookout.

(7) When an Automatic Stop signal has been passed at 'on', the Driver shall proceed with great caution until the next Stop signal is reached. Even if this signal is 'off', the Driver shall continue to look out for any possible obstruction short of the same. He shall proceed cautiously up to that signal and shall act upon its indication only after he has reached it.

S.R. 9.07. The Driver of a train passing an Automatic Stop signal at 'on' on single line shall also adhere to the provisions of subsidiary rules given under G.R.9.02

Q.4. Write the procedure of stabling of material train in the yard.

Ans 1. A material train shall not be stable on a running line at a station, except in unavoidable circumstances.
2. The stationmaster and guard are jointly responsible for ensuring that.
   a) Points are set against occupied line and locked and the keys of the padlocks shall be kept under the personal custody of stationmaster.
   b) Sufficient number of hand brakes including brake van are applied
   c) The train is berthed clear of fouling mark
   d) If any shunting is to be performed, the Guard shall supervise such shunting.
3. The guard is responsible for securing Materials train at an outlying siding.

Q.5 What are the means of communication available for obtaining line clear?

Ans. The following means of communication available for obtaining line clear.
a) Block instrument or track circuits or axle counter
b) Telephone attached to the block instrument
c) Station to station tele phone
d) Control telephone
e) VHF set.
F] BSNL telephone and Auto telephone.

2. The following procedure shall be adopted for working of trains.
1. Trains shall be brought to a stop at station.
2. The SM who has trains to dispatch shall open communication with the SM of block station at the other end by sending any one of the following vehicles in the order of preference.
   a) Light engine
   b) Train engine, after it is detached from the train.
   c) Motor trolley/tower car – accompanied by a guard or by off duty ASM
   d) Trolley/Cycle trolley/Moped trolley accompanied by a guard or by off duty ASM
   e) Diesel Car /EMU/DMU after detraining the passenger.

Q.6 While on duty the reception signal at your station becomes defective explain the procedure for piloting of train.

Ans (1) In the event of an Outer or a Home or a Routing signal becoming defective, the Station Master shall advise the station in rear and the nominated station in rear, save in case where a signal post telephone or a Calling-on signal is provided on the defective signal, in order that the Drivers of approaching trains may be warned of the defective signal and issued a written authority to pass such signal on receipt of Proceed hand signal at the foot of the defective signal.

(2) The Station Master in rear as referred to in sub-rule (1), on receiving the advice of the defective signal, shall immediately acknowledge it and advise the Station Master of the station where the signal has become defective, of the number of the first train which will be notified of the defective signal and again on receipt of the advice that the defective signal has been put into proper working order, shall advise the number of the train so notified last.

(3) The Station Master of the station where, the signal has become defective shall, before authorizing a train to pass the defective signal, ensure that the conditions for taking 'off' that signal have been fulfilled (all relevant points clamped and padlocked). He shall then authorize the Driver to pass the defective signal at 'on' in one of the following manners.

(a) When the Driver of an approaching train has been advised of the defective signal at station in rear-- by deputing a competent railway servant in uniform under clause (b) of sub-rule (1) of Rule 3.68, to exhibit Proceed hand signal at the foot of the defective signal to the approaching train. In such cases, the Station Master shall not give Line Clear to the station in rear unless the conditions for taking 'off' the signal which has become defective, have been complied with; or

(b) *When the Driver of an approaching train has not been advised of the defective signal at a station in rear*-- by having a written authority, authorizing the Driver to pass the defective signal at 'on', delivered at the foot of the defective signal through a competent railway servant; or

(c) by taking 'off' the Calling-on signal where provided; or

(d) by authorizing the Driver to pass the defective signal at 'on' over the signal post telephone where provided, in accordance with special instructions.

(4) When the Home signal becomes defective, the Outer shall also be deemed to be out of order and the procedure prescribed in sub-rules (1), (2) and (3) shall be followed.

S. R 3.69.1. The procedure laid down in the SWR for reception of trains should, rigidly, be complied with even during failure of signals, if interlocking permits.

2.1. The station in rear or the nominated station in rear shall on being advised of a defective signal notify the Drivers by issuing T/369(1)

The description of the signal such as first loop Home, second loop Home, main Home etc., should be clearly indicated.

2.2. If T/369(1) is not issued by the station in rear, the train shall be brought to a stop in rear of the defective signal. A written authority should, then, be delivered to the Driver to pass the defective signal at 'on' in accordance with G.R.3.69 (3b). The Driver should proceed at a speed

not exceeding 15 kmph only after observing the PHS exhibited at the foot of the defective signal by a competent railway servant in uniform.

3. In the two aspect signaling territory, the Driver of a train, when notified of a defective Home signal by the station in rear, or the nominated station in rear, may pass the Outer signal taken 'off' in conjunction with one of the Home signals in working order at a restricted speed of 15 kmph.

4. When the Outer signal is defective, the railway servant deputed at the foot of the Outer signal shall not deliver the written authority for passing the signal at 'on' or exhibit the PHS to the Driver, unless the relevant Home signal has been taken 'off' correctly. If the correct Home signal is not taken 'off', he should exhibit a Stop hand signal to the approaching train and stop the train at the Outer signal.

Q.7. Write short notes on the following.
1.Mansoon Patrolman not turned up in time.
10.4. if a Patrolman does not turn up within 15 minutes of his scheduled arrival, the SM on duty shall take the following action.

10.4.1. He shall stop run through trains proceeding into the block section:–

10.4.2. He shall advice the SM at the order end of the block section to take similarly action and also advice the SCOR, the Gang mate and the PWI.
10.4.3 He shall issue a caution order to all trains proceeding into the block section advising the driver to be on the alert and specify a speed restriction of 40 KMPH
The caution orders will be issued until the Patrolman has arrived and reported that the line is safe for passage of trains.

2. when no response from level crossing gate
When telephonic communication fails or it does not get any response from the Gateman despite or 3 attempts, the following procedure should be adopted

SM on duty shall send written advice to the Gateman through the porter with full details of number, description and direction of the train.

Gateman on receipt of such advice shall close the gate and transmit the key to the SM/Switchman which will enable them to take OFF reception/departure signals

When sufficient time is not available because of greater frequency of train service, SM will issue written authority to the train driver to pass the signal at ON position.

In addition the SM shall also issue a caution order advising the Driver to whistle continuously and approach the gate cautiously.

The train Driver shall be instructed to pass the gate cautiously, on being hand signaled by the Gateman. If hand signal is not seen, Driver should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73 (2) (b).

(vi) In case of an approaching train, the SM shall advise the SM at the dispatching end, that the telephone at the gate has failed.
(vii) The SM at the dispatching end shall then issue a caution order to the Driver before dispatching a train in the block section from his end.
(viii) SM should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
(ix) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

c] GATE PROTECTION RULES:-
In the case of an obstruction at the level crossing the gateman shall maintain the gate signals if any in "on" position. And shall show stop hand signal and do his best to stop approaching train if any. He shall at once remove the obstruction and if unable to do so, shall inform the station/cabin and shall proceed to protect the line as follows:-

1. On the double line, if both lines are obstructed, during day, he shall plant a staff fixed with red flag, 5 meters ahead of the obstruction on the line on which the train is expected to arrive first, and plant another staff fixed with red flag. 5 meters in the opposite direction on the other line. He shall then proceed on that line to a point 400 meters on the MG and 600 meters on the BG from the level crossing and place one detonator on the line, after which he shall proceed further to a point not less than 800meters on the MG and 1200 meters on the BG from the level crossing and place 3 detonators in staggered manner on the rails about 10 meters apart so that two will be on the driver side. Apart protecting the line on the a train is expected to approach first, he shall return to the level crossing, picking up the intermediate detonator on his way back. He shall then proceed on the other line showing the stop hand signal, place detonators similarly and return to the site of obstruction to warn the Driver of an approaching train.
2. On the signal line, if the line is obstructed during day, he shall plant the staff fixed with red flag 5 meters ahead of the obstruction towards the direction form which train is expected to arrive first and then plant the other staff fixed with red flag 5 meters in the opposite direction fro the site of obstruction. He shall then protect the line in the direction from which a train is expected to approach first, return to the site of obstruction and proceed the with all haste in the direction to protect the line. After protecting the line on both sides, he shall station himself at the place of obstruction to warn the driver of a approaching train.
3. In automatic Block territories on double line sections, if both lines are obstructed, during day, he shall plant a staff fixed with red flag 5 meters ahead of the obstruction on the line on which the train is expected to arrive first and plant another staff fixed with red flag, 5 meters in the opposite direction on the other line. He shall then proceed showing stop hand signal proceed on that line to a point 90 meters from the level crossing and place one detonator on the line after which, he shall proceed further to a point not less than 180 meters from the level crossing and place two detonators on the rails about 10 meters apart. After protecting the line on which a train is expected to approach first, he shall return to level crossing picking up the intermediate detonator on way back and he shall proceed on the other line showing stop hand signal, place detonators similarly and return to the site of obstruction to warn the Driver of an approaching train.

4. In Automatic block territories on signal line sections if the line is obstructed during day, he shall plant a staff fixed with red flag 5 meters ahead of obstruction from which a train is expected to arrive first, and then plan another staff fixed with red flag 5 meters in the opposite direction from the site of obstruction. He shall then as in sub-para 3, protect the line in the direction from which a train is expected to approach first, return to the site of obstruction and proceed in other direction to protect the line. After protecting the line on both sides, he shall station himself at the place of obstruction to warn the driver of an approaching train.
5. at night the gateman should light the two hand signal lamps and take action to exhibit red light and [protect the lines as in sub-para 1 to 4.

Q 8 Mention the Zonal railways,. Which are in Operation in Indian Railways along with their Head quarters.?

Ans :

Zonal Railway		Head Quarters.
1. Central Railway	-	Mumbai
2. Eastern Railway	-	Kolkata
3. Northern Railway	-	Delhi
4. North Eastern Railway	-	Gorkhpur
5. Northeast Frontier Railway	-	Guwahari
6. Southern Railway	-	Chennai
7. South Central Railway	-	Secunderabad
8. South Eastern Railway	-	Kolkata
9. Western Railway	-	Mumbai (Church gate)
10. North Western Railway	-	Jaipur
11. East Central Railway		-Hajipur
12. East Coat Railway	-	Bhubaneswar
13. South Western Railway	-	Hubli
14. West Central Railway	-	Jabalpur
15. North central Railway	-	Allahabad
16. South East Central Railway	-Bhilaspur	

Q 9. Write a letter to your officer asking for 20 days LAP?

Model letter

Date:
Place

To
Sr. Divl. Operations Manager
Hyderabad Divn
Secunderbad.

Respected Sir,

Sub: Request for leave (LAP) – Regarding.

Kindly grant me ____ days leave (LAP) from _____ to _____ as my daughter's marriage is to be performed on _____

Thanking you sir,

Yours faithfully
Name,
Design,
Station.

Q 10. Write short notes on

a) Engine pushing
b) Caution order
c) Working time table
d) Material train.

a) Engine Pushing
   a) No engine may push the train out side station limits expect in accordance with special instructions.
   b) This rules shall not apply to a train the leading vehicle of which is equipped with driving apparatus (Push – Pull train)
   c) This rule shall not apply to an engine assisting in rear of train.
   d) Patrol or searchlight special with one or more vehicles in front of the engine may be permitted to run at a maximum speed of 40 KMPH.
   e) Engine pushing may be permitted in the following circumstances.
      1) In connection with working of material trains.
      2) Inability of the engine to haul the load.
      3) Trains are required to work to the point of obstruction.
      4) Working of relief/Transshipping train during accidents.
      5) To pick up injured passenger, if considered necessary.
   f) Except in case of (5) when it is not possible to go forward, and no relief engine is available, the guard in consultation with the Driver, can decided to push back the train.
   g) The guard /Driver shall contact SMs/SCOR/TPC telephonically and obtain permission to push back. Such permission will be given by rear Station Master supported by PN.
   h) If guard/driver cannot contact SMs/SCOR/TPC, the guard/Assistant Driver shall walk to the nearest station. If the station in advance is nearest, SM of the station shall issue caution order permitting pushing back after obtaining permission from stationmaster in rear supported by PN. If the station in rear is nearest the SM permits pushing back by giving caution order.
   i) The guard shall travel in the leading vehicle, if it is fitted with brake valve or hand brake, If not travel in the nearest vehicle fitted with brake valve.
   j) The speed of the train is restricted to 25 KMPH when guard is traveling in the leading vehicle and 8 KMPH when guard is not traveling in the leading vehicle.
   k) The guard while pushing the train, shall keep a good look out and continuously exhibit PHS.

l) On single line, reception can be arranged by taking off signals after stopping the train at FSS.
m) On double line, reception can be arranged by piloting after stopping the train either at opposite to FSS of other line or LSS of same line which ever he comes across first.

b CAUTION ORDER:

1. Whenever, in consequence of the line being under repair or for any other reason, special precaution are necessary, a caution order detailing the kilometers between which such precautions are necessary, the reason for taking such precaution and the speed at which a train shall travel, shall be handed to the Driver at the stopping station immediately short of the place where such precautions are necessary, or at such other stations and in such manner, as prescribed under special instructions.

2. Sub – Rule (1) does not apply in the case of long continued repairs when fixed signals are provided at an adequate distance short of such place and have been notified to the running staff concerned.
3. The Caution order referred to in sub-rule (1) shall be on white paper with green font and be made out and signed in full: Provided that as a temporary measures the caution order may be on white paper with a green band running diagonally across the form

c) WORKING TIME TABLE

The working timetable is supplied to all the running staff the information pertaining to each section is presented in the following sequence.

a) First sheet gives salient sectional information such as system of working traction; line capacity utilization ruling gradients, passenger load table, total route kilometers, number of stations and axle load.
b) Standard of interlocking/signaling and loop capacity
c) Detailed sectional timings of Express/Passengers trains
d) Skip timings
e) Time allowance provided for Mail/Express trains and authorized detentions for connecting at Junction stations.
f) Intersectional running times.
e) Integrated blocks for maintenance and traffic/Engineering payments schedules.
f) Permanent speed restrictions
g) Speed restrictions on steep gradients
h) Details of level crossing gates.
i) The general information pertaining to whole division is given in one group in the last section under the heading – other information.

d. Material Train: Material train' means a departmental train intended solely or mainly for carriage of railway material when picked up or put down or for execution of works either between stations or within station limits.

Q 11. What is shunting? Explain shunting precaution and authorities

Shunting means movement of vehicles from one line to another line with or without engine or a light engine or detaching or attaching of vehicles.
They are five types of shunting they are

1. Hand shunting
2. Flat shunting or push and pull shunting
3. Loose shunting
4. Fly shunting
5. Hump Shunting.

1. Shunting operations should be controlled by fixed signals or hand signals or by verbal instructions.
2. The driver shall, before moving, observe the stop signal/shunt signal taken off for him / observe the hand signals of the railway servant conducting shunting.
3. At the stations where separate shunting staff is employed, they shall attend to all shunting operations. The Guard shall supervise at all other stations, shunting operations.
4. In the case of shunting of trains from one line to another line across main line or wagons containing explosives, the shunting operations shall be carried out under personal supervision of SM.
5. No vehicle shall be loose shunted unless it is equipped with an effective hand brake or unless it is attached to another vehicle, which is so equipped. A loose shunted vehicle shall be accompanied by a railway servant to pin down the hand brake whenever necessary.
6. Loose shunting of or against empty or loaded oil tank wagons, trucks loaded with heavy machinery / rails / timber, cranes, vans loaded with explosives, livestock, wagons labeled as “not to be loose shunted”, coaching vehicles etc., is prohibited.
7. In case the shunt movements are governed by shunt signals or starter signal, which detect the facing points, the shunt signal or starter shall be taken “off” and in all other cases the facing points shall be clamped/ cotter bolted and pad locked.
8. The speed during shunting operations shall not exceed 15 Kmph. In case of vehicles containing inflammable liquids, explosives, the speed is restricted to 8 Kmph.
9. Carriages occupied by passengers shall not be moved for shunting purposes without the orders of the SM and also the Guard of the train who will jointly responsible to warn and prevent accident to the passengers in the carriages or those who entrain or detrain thinking that the train is leaving.
10. Slip coaches shall not be kept on blocked line in the rear of passenger carrying trains.
11. While performing shunting on passenger carrying trains, shunting engine with or without coaches shall first come to a halt at 20 m away from the train and thereafter perform shunting carefully.
12. When vehicles moved by an engine for attaching to passenger train, the vacuum brake should be connected up so that adequate brake power will be available.
13. In case of shunting on Goods trains at intermediate station the vacuum brake shall, as far as possible, be connected with engine.
14. No engine shall be allowed on to a line where passenger carrying is waiting, except the one which has to perform shunting on the same train.
15. Gradients of 1 in 400 or steeper in respect of roller bearing stock and 1 in 260 or steeper in respect of other than roller bearing stock are considered as steep gradient.
16. Hand shunting of carriages occupied by passengers is strictly prohibited.
17. At a station yard where the outer most points are on a steep gradient, shunting shall be done only with the engine attached towards the falling side of the gradient.
18. Hand shunting of the roller bearing stock is prohibited at a yard where the outer most points are on or within 100 m of a gradient steeper than 1 in 400.
19. Hand shunting of other than roller bearing stock is permitted at a station yard on a gradient steeper than 1 in 260, having slip, subject to the following precautions:
    a) The block section is free of an approaching train.

b) Personal supervision by SM or competent staff.
c) Only one vehicle is moved at a time.
d) The vehicle to be moved is fitted with an efficient hand brake.
e) A competent railway servant mans the hand brake.
f) The speed does not exceed 5 Kmph.

AUTHORITIES TO BE GIVEN FOR SHUNTING AT CLASS *'B'* STATION/ SINGLE LINE (APP. XII OF G&SR) :

1. Where shunting operations are supervised by Guard/ ASM, Driver shall be given T.806 (Shunting order form) duly filled in. At major stations where separate staff viz., outdoor SM/ AYM/ Shunting Jamedar/ Shunting Master are provided for supervising. the shunting, form No.T.806 need not be given. The respective Sr.DOMs will notify such stations.

2. Shunting operations shall be controlled by fixed signals or hand signals or by verbal directions.

3. Outer, Home and LSS should not be taken 'off for shunting.

4. If Advanced starter is provided, free Starter can be taken 'off for shunting.

5. When a fixed shunt signal on a post by itself or below a stop signal or Shunting permitted indicator becomes defective, T / 369(3b) shall be issued and , PHS shall be shown from the foot of such defective signal after ensuring the locking of points.

6. <u>SINGLE LINE:</u>

i) Shunting within the station section: T.806.
ii) Up to FSS: Provided that no train is on line clear and signals are at 'ON': T.806 in token sections, T.806 + shunt key in token less sections.
*If shunt key cannot be extracted in Podanur Push button type block instrument, advise SM at the other end to take out shunt key and give PN. T.806 with PN is the authority for the Driver.
iii) Beyond FSS: Treated as train movement. Authority under the system + Memo to the Driver to push back to the station after the shunting is completed. Take 'off 'all departure/reception signals for departure and reception.
iv) Shunting beyond the Home signal in TAS territory and outermost facing points in MAS territory, in the· face of an approaching train - Generally not permitted. If permitted, the following conditions
Should be fulfilled:

a) SLB / Advanced starter is provided

b) Permission is indicated in SWR.

c) Shunting warning board is provided in rear of FSS

Note: In TAS territory. after ensuring that the incoming train has come to a stop at the outer signal, shunting may be performed upto Outer signal, subject to the following conditions.

i) When authorized by Special Instructions.
ii) Shall not be done in thick, foggy or tempestuous weather impairing visibility or during night
iii) Provision shall be available in SWR

7. DOUBLE LINE:

i) Within station section: T.806.
ii) Beyond LSS: Block forward & T.806 with PN.
iii) Beyond LSS behind a train traveling away:
T.806. Without PN if SWR permits. As soon as the preceding train clears the section. the line should be blocked forward if the shunting is not completed.

iv) Behind BSLB / outermost facing points: Block back & T.806 with PN.
v) Involving LSS : T.806 with PN + T.369 (3b) to pass LSS at 'on'. (Both sections shall be treated as one.)

Q 12. Write the names
j) Railway Minister :
k) Chairman Rly Board:
l) C.R.S :
m) General Manager :
n) DRM/SC :
o)

Q 13. Write a letter to your friend abut your visit to a tourist place
Candidates has to write the letters on their own according to the question asked.

Q 14. Write a letter to your father about your job
Candidates has to write the letters on their own according to the question asked.

Q 15. Write a letter to your friend about your experience of a long journey by train.
Candidates has to write the letters on their own according to the question asked.

11. Differentiate between
a) General rule & Subsidiary Rule
b) Facing points & Trailing points
c) Slip siding & catch siding.
d) SLB & BSLB

a)	General Rule	Subsidiary Rule
1.	These rules are framed by Railway Board	These rules are issued by the COM (authorized officer)
2.	These are framed under section 198 of the Indian Railway Act 1989 and have received the sanction of the Govt of India	These rules are issued on the authority of G.R. 1.0-2 (5) by GM under the provision of General Rules.
3.	These are applicable to all zonal railways	These are applicable to particular zonal railway only.
4.	GRs can be revised or amended by railway board.	SRs can be amended by Authorized officer.
5	GRs are printed in bold letters.	SRs are printed in small letters.
6.	They are numbered in such a way that the first digit indicates number of chapter and other digits indicate number of rule.	These are given under GR with same number prefixed by SR.
b)	Facing point	Trailing point.
1.	Point are said to be facing when by their operation a train approaching them can be directly diverted from the line upon which it is running.	Trailing point cannot divert the train direction.
2.	Facilitates diverging movements.	Facilitates converging movements.
3.	Locking is essential before permitting a movement over them	Locking is not essential (except motor operated points)
4.	Speed over the facing point depends on the mode of interlocking	Speed over trailing points is not prescribed.
5.	Trains passes from toe end	Trains passes from heel end.
c)	Slip siding	Catch Siding.
1.	Protects the block section.	Protects station section.
2.	It is provided where falling gradient towards block section is steeper than 1 in 100	IT is provided where falling gradient towards station (section) is steeper than 1 in 80
3.	IT prevents vehicles at station escaping on to the main line.	It catches vehicles from adjacent station or block section.
4.	IT is a short siding.	IT is a lengthy siding.
5.	When points are spring loaded sign board ‘A” is provided clear of fouling mark	When pints are spring loaded two sign boards. One (A) clear of fouling mark and another (B) at a distance of 732 mtrs in advance of points.

1. Normal setting points is for slip/Catch siding.
2. Both sidings shall to be used for shunting or stabling purpose.

3. Interlocking with block instrument is compulsory.

d)	SLB	BSLB
1.	It is provided on single line	It is provided on double.
2.	It is provided both in TAS and MAS	It is provided on MAS only.
3.	SLB/A starter shall be provided where obstruction is permitted in face of approaching train beyond Home in TAS and beyond outermost facing points in MAS.	IT shall be provided where outermost points are trailing or where there are no points.
4.	IT shall be placed at a distance of 400 m in TAS and 180 m in MAS from FSS.	It shall be placed at a distance of 180 m In advance of the Home signal
5.	This board bears the words Shunting limit.	This board bears the words Block section limit.

Q.16. WRITE SHORT NOTES ON (ANY THREE)

I) GRIEVOUS HURT
II) SABOTAGE
III) TRAIN WRECKING
IV) ENGINE FAILURE AND TIME FAILURE
V) COLLISION
VI) DERAILMENT.

Grievous Hurt: Grievous Hurt as defined in section 320 of the Indian Penal Code Includes.

a. Emasculation.
b. Permanent privation f the sight of either eye.
Permanent privation of the hearing of either ear.
d. Privation of any member or joint.
e. Destruction or permanent impairing of the powers of any member or joint.
Fracture or dislocation of a bone or tooth
g. Permanent
Any hurt which endangers life or which causes the sufferer to be, during the span of twenty days, in severe bodily paint or unable to follow his ordinary pursuits.

2. Sabotage: Means the criminal interference with any part of the working machinery of a railway with the object of rendering it inoperative or any act intended to cause damage to railway property other than train wrecking or attempted' train wrecking.

3. Train Wrecking: Means the willful obstruction of or tampering with the permanent way, works or rolling stock, resulting in an accident to a train with or without loss of life or damage .

Engine failure and time failure:

a) An engine is considered to have failed when it is unable to work its booked train from start to destination. Reduction of the load for a part of the journey would constitute an engine failure, provided this is due to a mechanical defect on the engine or mismanagement on the part of the engine crew.

Note: In the even of an engine failure, the Driver shall give written advice of it

to the Guard. The Guard will advise the Station Master who will issue the necessary" All concerned" message.

b) When an engine causes a net delay of one hour or more throughout the entire run owing to some mechanical defect or mismanagement on the part of the engine crew, it would constitute a time failure. Train stalling due to engine trouble or mismanagement by the engine crew necessitating working of the train in two portion would constitute a time failure provided the net loss of time on the entire journey exceeds an hour.

COLLISION

Collision are one of type of the accident in which two trains vehicles /wagons/self profiled vehicles collide each other either in the same direction are opposite direction and also includes side collision.

The collision is the most dreaded of all railway accidents as it is likely to result in grave consequences. In fact, the causalities have been heavy in case of collisions as compared with other consequential accidents. Such accidents are, therefore, viewed seriously collisions may be of the following types.

• Head -on collision, i.e. one train ramming into the other from the rear.

- Side -collision due to a train moving on a partially blocked line fouled by a train or vehicle on the adjacent line.

- Collision between a train and a trolley pushed into the same section in violation of the Block Working rules.

- Averted Collision: An averted collision is a circumstances under which, but for the vigilance shown by any person or persons, a collision would have occurred either in the block section or within the station limits between two trains or between a train and an obstruction.

• These collision falls under Al to AS class and Fl to F4 class.

Derailment:

When ever a train are vehicle /wagon involved in an accident and whose wheels are gone off the track is known as derailment.

Derailment can be classified into 3 Yard derailment/station derailment, Mid section derailment.

Derailment are classified in accident manual under class D from D1 to D6

Q.17. Write short notes on

a) Train delayed in mid section
b) Engine unable to haul the load

c) Weld failure
d) Rail breakage
e) Averted collision.

a) Train Delayed in Mid Section.

1. If a passenger carrying train does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time, the SM shall immediately advise the station in rear and the control of this fact.
2. Both the SMs shall stop all trains proceeding into the block section on adjacent line/lines and warn the drivers and guards by issuing caution orders and also ascertain the where about of the delayed train.
3. The SM shall also send a railway servant into the block section to get information regarding the where about of the delayed train.
4. On double line sections, if there is tunnel in which the train is delayed, the SM shall not allow any train in the opposite direction until he ensures that the line is clear.
5. The guard of the train carrying passengers, when delayed in the block section for over ten minutes, shall inform the SCOR through portable field telephone, the cause and the probable detention for the train.
6. The SCOR on receipt of such advice shall immediately alert the stations where ART and MRT are located to keep them in readiness for moving them immediately on receipt of further information, if required.

b) Engine unable to haul the Load.

The driver of a train at time may feel that the engine is not in a position to haul the load due to the following circumstances:

1. Stiff gradients
2. Excess load
3. Engine defects
4. Weather conditions.

When driver felt that engine is not in a position to haul the load, he shall bring the train to a stop on a level grade and then:

Firstly protect, secondly inform and finally to clear the block section:

a) Driver shall inform guard about inability to proceed by whistle code (0 0 0 0)
b) Train be protected as per G.R. 6.03
c) Clear the block section by choosing one of the three alternatives viz (i) To push back to the block station in rear (ii) to divided and clear and (iii) to ask for relief engine.

c) WELD FAILURE:-

It is of paramount importance that whenever a weld failure is noticed, immediate action is taken to restore the track, if necessary with restricted speed with the least possible delay. The mate/key men /Gagmen, as soon as he notices the weld failure should first protect the track. He should also send information to the PWI and the stationmaster of the nearest station .In the

case of weld failure, joggled fish –plates and clamps should be used. After doing the emergency repairs the trains may be passed at 20KMPH by a Mate/Keyman, until the PWI attends.

d) Rail breakage

1. If a driver realizes, while on run that there is rail breakage he shall stop the train immediately, protect the train and examine. If considered safe, he will proceed. If considered unsafe, Engineering Official has to certify for the passage of trains.
2. If a Gang mate /Key man/Patrolman detects rail fracture of less than 30 mm gap, he shall show stop hand signals and inform Driver of first train to pass the fracture spot at 10 KMPH and subsequent trains at 15 KMPH.
3. Driver of the train shall stop his train at the next block station and give memo about the rail fracture.
4. SM, who receives report from Driver about the rail fracture, shall inform the SM of the station at other end of the block section.
5. Both the SMs shall arrange to issue caution order to trains to observe SR of 15 KMPH and also advise all concerned.
6. If the gap is more than 30 mm or in case of multiple fractures, PWM/PWI only is authorized to pass the trains after attending the track.

e) AVERTED COLLISION

An averted collision is a circumstance under which, but for the vigilance shown by any person or persons, a collision would have occurred either in the block section or within the station limits between two trains or between a train and an obstruction.

Provided, further, that such an occurrence may not be treated as an Averted Collision.

a) If, outside the station limits, the distance between the two trains or the train and the obstruction at the time the train or trains have finally come to a stop is 400 metres or more.

b) If, within the station limits, there is an intervening stop signal at danger governing the moving train and compliance by the moving train with the indication conveyed by the stop signal averted the collision between the trains or between the train and the obstruction.

Q.18. What are the incentives and Awards provided by Railways for effective implementation of Hindi as official language?

Ans: Railway Boards Awards

Railway Minister gives this award every year at all India Hindi Week Celebrations. 6to 8 officers/ employees are awarded. Each awardees will be given Rs. 1000/- and a certificate.

General Manager's Award

This award is given by GM every year on the eve of SC Rly's Hindi Saptah Celebratations. 10 Officers 30 employees will be awarded. Each awardee will be given Rs. 1000/- and a certificate.

Home Ministry's Award.

Employees of all the Zones can participate subject to the following conditions. Officers/employees working in regions.

'A' and 'B' Regions.
For writing minimum 2000
Words in Hindi per year.

"C" Region.
for writing minimum 10000 words in
Hindi per year.

Awards Given
Two first prizes - Rs. 800/- each
Three second prizes - Rs. 400/- each
Five third prizes - Rs. 300/- each
Collective Cash Award
Given to three departments for doing commendable work in Hindi.
1 Prize - Rs. 6000/- 60 employees
2 Prizes - Rs. 4000/- 40 employees
3 Prizes - Rs. 3000/- 30 employees.

ESSAY WRITING, ELOCUTION, NOTING AND DRAFTING COMPETITON AWARD
Every year these competitions are conducted at Board level and Zonal level and 1st, 2nd and 3rd prizes are given to the winners for each of the above said competitions separately.
Board level competitions is conducted in August.

1st prize - Rs. 700
2nd prize - Rs. 600
3rd prize - Rs. 500
Consolation - Rs. 200)for 5)
Zonal level competition is conducted in July.
1st prize - Rs. 600
2nd prize - Rs. 500
3rd prize - Rs. 400
Consolation - Rs. 100(for 3)
Training Awards
Officer/Employees of Group A,B,C to pass Prabodh/Praveen/Pragy examination will be given lumpsum award on passing
Parveen/Prabodh – Rs. 6000 Pragya – Rs. 800/-
In addition to the above award if they secure the following percentage of amrks addition amount is given.
Prabodh, Praveen & Pragya

70% or more - Rs. 600
60% or more - Rs. 400
55% of more - Rs. 200
In addition to the above for a period of 12 months an amount equal to the employees increment is also given.

Divisional Award.
During Railway Hindi Week Celebration Divisional Awards are also given to the Officer/employees who has done commendable work in Hindi, according to the funds available for Hindi implementation scheme.

Q.19. Write short notes on
a) Point indicators
They are necessary – in multiple aspect upper quadrant territory when signal armed home signal is provided and in multiple aspect colour light signaling territory when route

indicator is not provided on Home signal or when there are no departure signals or when there is common departure signal.
Point indicator shall show a white target by day or a white light by night in both directions when the points are set for the straight and no target by day and a green light by night in both directions when the points are set for the turn out.

b)Crank Handle

Crank handles are provided at stations where motor operated points are provided. When motor operated points fall crank handles are required to operate the points. They are chained to keys in HKTs which are housed in boxes, padlocked and scaled. A releases button is provided on HKT by pressing by which the key can be taken out. Once this is done, the concerned pressing by which the key can be taken out. Once this is done, the concerned route will get disconnected and signals will refuse to assume off aspect. Crank handles should be used, strictly in accordance SR 3.38 whenever points are operated by crank handle they should be clamped and padlocked. A crank handle Register should be maintained giving particulars of its use. After the failure is rectified the crank handle must be restored in the Box and HKT key inserted in the HKT and turn fully to the right 'Key in" indication appears on the panel. The box should be then be locked and sealed.

c).HKT

It is a time saving electrical arrangement for transmitting keys over long distances. A cast iron case with an indicating needle and a key hole is kept at both the places concerned. One of the key remains locked in one of those instruments at one time. If 'A' wants to transmit the key to 'B' he will insert it in the key hold of the transmitter and turn it in the clock wise direction. This causes both the needles deflect and a bell to ring at "b", "b" will then turn the key at his end in the anti clock wise direction and take it out. This stops the bell and bring the indicators to normal. "A' leaves the key in the transmitter which gets locked up 'B' will return the key to 'A' after the work by repeating the procedure. HKT is useful in interlocking a number of outside siding points, gates, slip siding etc with reception or dispatch signals. It is also used to connect LSS with the block instrument.

Q.20. Write short notes on

a)All right signal
b)Banner flag
b) Detonators

1.The Driver and the Guard of a train shall, while running through a station, look out for and, except under special instructions, acknowledge the 'all-right' signals which the Station Master and such other staff at the station as may be specified by special instructions shall give if the train is proceeding in a safe and proper manner. If the train is not proceeding in a safe and proper manner, the Station Master or the other staff shall exhibit a Stop hand signal on receipt of which the Guard and the Driver shall take immediate steps to stop the train.

1.1. The 'all-right' signal is given by holding out the green flag horizontally by day and by waving the green light horizontally by night. This signal shall normally be exchanged on the

platform side unless the track is on a curve and signals cannot be seen from that side. When a train starts after stopping outside the station limits, the signals shall be exchanged on the left hand side, unless the track is on a right hand curve, in which case signals shall be exchanged from the other side.

1.2. The Driver may depute the Assistant Driver to exchange 'all-right' signals on his behalf.

2. Exchange of 'all-right' signals between the Guard and the Driver.

To ensure that the Guard is in his brake-van and that the train can proceed, 'all-right' signals shall be exchanged between the Guard and the Driver as detailed below .—

2.1. When a train starts after stopping at a station.

2.2 When a train starts after stopping between stations.

2.3. When a train runs through a station.

2.4. While passing through ghat section.

2.5. When approaching important girder bridges.

Banner flag

A banner flag is a temporary fixed danger signal, consisting of a red cloth supported at each end on a post and stretched across the line to which it refer. Banner flag shall not be less than 150 centimeters long and 45 centimeters wife. The shall be stretched across the track on poles not less the 1.5 metres high at an adequate distance from the stop which they are intended to protect.

Detonators

Detonating signals otherwise know as detonators or fog signals, are appliances which are fixed on the rails and when an engine or a vehicle passes over them, the explode with a loud report so as to attract the attention of the driver.

Q.21. How will you receive a train on obstructed line
In case of reception of a train on to an obstructed line, the SM shall:
wherever possible, intimate the Driver through the SM in rear about the reception of train on obstructed line.
Keep the reception signals on 'ON'
Ensure that all points leading to the said line are correctly set and facing points are clamped and padlocked when received on authority T 509 or one signal post telephone.
After stopping the train at the relevant stop signal, it may be received by authorizing the driver to pass the stop signal at 'ON'

By taking off the calling on signal, if provided, or
By authorizing to pass the signal at ON duly giving a P.N through telephone on the signal post, if provided or
By delivering a written authority (T/509) and piloting it.
Stop the train at the facing point leading to the obstructed line and hand signal forward by a competent railway servant.Show stop hand signal at a distance of 45 mts from the obstruction.
The Driver shall keep his train well under control and be prepared to stop short of any obstruction

Q.22. Procedure for stabling of train on running line

Stabling of trains on running line at stations

Vehicles detached from a train shall not be allowed on a running line for a longer period that absolutely necessary

They shall be coupled together and all the necessary hand brakes of vehicles and brake van to be applied.

Vehicles not provided with hand brakes shall be secured by chains.

At night, the side and tail lamp of coaching vehicles at both ends shall be switched ON. If not, fix hand signal lamp showing red at both ends. In case of goods vehicle berthed on main line tail lamps, f available, duly lit, shall be fixed at both ends during night time.

Red ink entry shall be made in TSR

The SM shall advise and exchange private numbers with cabin ASMs when running line is occupied and cleared.

The occupation of running lines shall be recorded in the station diary at the time of handing over and taking over charge.

be stabled on non – running lines or on lines which are isolated from other running lines.

When the track machine is stabled on a running line due to unavoidable circumstances, the mechanical had brake shall be applied and the machine shall be securely chained to the rails. (SR 4.65.8.3)

Q.23. What are the occasions when caution order is issued

1. Circumstances under which Caution Orders are to be issued:
1.1. When engineering works or repairs are undertaken inside or outside station limits.
1.2. When unusually slack or rough running or heavy lurch is reported by the Driver.
1.3 When any Patrolman does not report at the time at which he is due.
1.4 Unsafe condition of the bunds of tanks or rivers.
1.5 when water level rises over the danger level marked at bridges.
1.6 when emergency patrols are put on.
1.7 When there is doubt or suspicion from the condition of run through passing train or observations made, that the block section in rear might have been affected or obstructed during the passage of the train.
1.8. On sections where bell and /or telephone communications have been provided between level crossing gate (outside FSS) and either of the two stations of the block section, if the Gateman's acknowledgement is not received for a train to enter the block section from either end.
1.9. Lorry on line.
1.10. Trolley on line on the specified sections notified in SR. 15.26. 2.1
.
1.11. When a signal is newly erected or recited.
1.12. Any other condition or circumstance which may require the issue of a Caution Order or Caution Order issued under local or special instructions.

Q.24. What is weather warning message and the action taken by SM after receiving the same?
Weather warning message is a message received from Meteorological Department or weather forecast made by All India Radio/Television,
When Weather warnings are issued

a) When rainfall is likely to exceed 5 cms in 24 hours (limit of rainfall)
b) When wind velocity is likely to exceed 65 KMPH (limit for wind speed)

ii) convey the weather warning message to the AND/Section Engineer/P.Way/Gangmate.
iii) Inform nominated patrolmen at the station.
iv) Maintain continuous record of message in a register.
v) Obtain acknowledgement about delivery of message in the register.
vi) Detain a train in case of heavy cyclonic storm when there is doubt or safety of train in consultation with Driver and guard
vii) Refuse line clear for any incoming traim under above circumstances.

Q.25. What are Hand signals used while performing shunting

Ans Hand signals used for shunting
[a] Indication: Move away from the person signaling.
How given by day: By a green flag or one arm moved slowly up and down.
How given by night: By a green light moved slowly up and down.
[b] Indication: Move towards the person signaling.
How given by day: By a green flag or one arm moved from side to side across the body.
How given by night: By a green light moved from side to side across the body.
Note: The hand signals for move away from the person signaling and move towards the person signaling shall be displayed slower and slower, until the stop hand signal is given if it is desired to stop.
[c] Indication: Move slowly for coupling.
How given by day: By a green and flag held above the head or both hands raised over the head and moved towards and away from each other.
How given by night: By a green light held above the head and moved by twisting the wrist

Q.26. Define:

a. Station
Station' means, any place ON a line of railway at which traffic is dealt with or at which an authority to proceed is given under the system of working.

b. Day 'Day' means from sunrise to sunset.

c. Line Clear
Line clear' means the permission given from a block station to a block station in rear for a train to leave the latter and approach the former, or the permission obtained by a block station from a block station in advance for a train to leave the former and proceed towards the latter

d. Act. 'Act' means the Railways Act, 1989 (24 of 1989)

Q.27. Write Short notes on

a) Marshalling of wagons containing explosives
b) Marshalling of SLRs
c) Marshalling of dead engines
d) Marshalling of wagons containing Petroleum and other inflammable liquids

a) Explosives:

a) Maximum number of such wagons allowed by goods trains are five, by mixed or Parcel trains are three.
b) They shall be separated by dummy wagons as follows: Not less than three dummy wagons from steam engine, B/Van, Passenger coaches, wagons containing dangerous goods. or inflammable articles.
c) They shall be coupled close by each other as well as other wagons.

b) Marshalling of SLRs:

a) SLRs shall be at the extreme end of the formation of the train. I.e. next to the engine and rear most.
b) Maximum of 2 coaches may be attached in rear of SLR of Express trains. A saloon can be an additional coach.
c) Passenger trains also follow the stipulations described in para (b); on short distance passenger trains SLR can be in the middle of the composition and three coaches are permitted in the rear of SLR.

c) Dead Engines:

a) If permitted it can be next to train engine.
b) If not permitted next to train engine six guard wagons must intervene between dead engine and any other engine.
c) Two and more than two dead engines are permitted by a same train.
d) Dead engine shall not be the last vehicle of the train.

d) Wagons containing petroleum and other inflammable liquids.

1. No limit as regards to the number of such wagons.
2. Must be coupled closely.
3. Guard wagons: Class A

a. From engine, passenger coaches or brake van and other wagons containing explosives, dangerous goods and inflammable articles not less than three
b. Electrical/diesel engines –not less than one.

Class B.

1. This wagon should be separated from Electric/Diesel Loc, B/Van, Pass coach by one dummy wagon.
2. Compressed and liquefied gases by two wagons.
3. Explosives by three wagons.

Q.28. ABBREVATION

LHB COACH:	LINKE, HOFFMANN BUSEH COACH
IRWO:	INDIAN RAILWAY WELFARE ORGANISATION
RAILS:	RAILWAY ANALYSIS INTER ACTIVE LINE SIMULATOR
ZRTI:	ZONAL RAILWAY TRAINING INSTITUTE
CRIPS:	CLAIMS INFORMATION TRAINING INSTITUTE
RWF:	RAIL WHEEL FACTORY
POET:	PASSENGER OPERATED ENQUIRY TERMINAL
IVRS:	INTER VOICE RESPONSE SYSTEM
CONRAJ:	CONTAINER RAJDHANI
CONTRACK:	CONTAINER ON TRACK
PQRS:	PLASSER QUICK RELAY SYSTEM
CCRS :	CHIEF COMMISSIONER OF RAILWAY ,SAFETY.
CORE :	CENTRAL ORGANISATION FOR RAILWAY ELECTRIFICATION
DMRC :	DELHI METRO RAIL CORPORATION
KRCL :	KONKAN RAILWAY CORPORATION LIMITED
BOLT :	BUILT OPERATE LEASE AND TRANSFER
TOT :	TRANSFER OF TECHNOLOGY
IRCON :	INDIAN RAILWAY CONSTRUCTION COMPANY LIMITED
MRVC :	MUMBAI RAIL VIKAS CORPORATION
CONCOR :	CONTAINER CORPORATION OF INDIA LIMITED
TAWD :	TRAIN ACTIVATED WARNING DEVICE
COIS :	COACHING OPERATIONS INFORMATION SYSTEM
COFMOW:	CENTRAL ORGANISATION FOR MODERNISATION OF WORKSHOPS
ACD ;	ANTI- COLLISION DEVICE
RAILTEL :	RAIL TEL CORPORATION OF INDIA LIMITED
MOU :	MEMORANDUM OF UNDERSTANDING
OFC :	OPTICAL FIBRE CABLE
NRVY :	NATIONAL RAIL VIKAS YOJANA
IRCTC :	INDIAN RAILWAY CATERING AND TOURISM CORPORATION LIMITED.
HRD :	HUMAN RESCUE DEVICE
CAD :	COMPUTER RESCUE DEVICE
PINS :	PERSONAL INFORMATION SYSTEM
EASY :	EMPLOYEE ACCOUNTING SYSTEM
EICS :	EMPLOYEE INCENTIVE CALCULATION SYSTEM.
TAMES :	TIME ATTENDENCE ACCOUNTING SYSTEM
FACT :	FINANCIAL ACCOUNTING SYSTEM
STROMS :	STORE MANAGEMENT SYSTEM
PURSYS	PURCHASE SYSTEM
PLANS	PLANT MAINTENANCE SYSTEM
NTPC	NATIONAL TRANSPORT POLICY COMMITTEE
IUC	INTERNATIONAL UNION OF RAILWAYS
WOC	WEIGHT ONLY CONDITON
RSRC	RAILWAY SAFETY REVIEW COMMITTEE
TPWS	TRAIN PROTECTION AND WARNING SYSTEM
IRWWO	INDIAN RAILWAY WOMEN WELFARE ORGANISATION
BOOM	BUILD, OWN, OPERATE AND MAINTAIN
CWC	CENTRAL WAREHOUSING CORPORATION LIMITED
EPZ	EXPORT PROCESSING ZONE

LRDSS	LONG RANGE DECISION SUPPORT SYSTEM
ROSHAN	ROLLING STOCK HEALTH ANALYST
SRSF	SPECIAL RAILWAY SAFETY FUND
TVU	TRAIN VEHICLE UNITS
SPTM	SELF PRINTING TICKET MACHINE
BOT	BUILD, OPERATE AND TRANSFER
DTFM	DUAL TONE MULTIPLE FREQUENCY
MEMU	MAIN LINE ELECTRICAL MULTIPLE UNIT
DHMU	DIESEL HYDRAULIC MULTIPLE UNITS
NTKM	NET TONNE KILOMETERS
WTR	WAGON TURN ROUND
USFD	ULTRA SONIC FLAW DETECTOR
SPURT CAR	SELF PROPELLED ULTRA SONIC RAIL TEST CAR
IRICE	INDIAN RAILWAY INSTITUTE OF CIVIL ENGINEERING.
IRISET	INDIAN RAILWAY INSTITUTE OF SIGNAL ENGINEERING AND TELECOMMUNCIATION.
IRIMEE	INDIAN RAILWAY INSTITUTE OF MECHANICAL AND ELECTRICAL ENGINEERING.
IRIEEN	INDIAN RAILWAY INSTITUTE OF ELECTRICAL ENGINEERING
IRITM	INDIAN RAILWAY INSTITUTE OF TRANSPORT MANAGEMENT
IRFC	INDIAN RAILWAY FINANCE CORPORATION LIMITED
RCC	RAILWAY CONVENTION COMMITTEE
RDSO	RESEARCH, DESIGN AND STANDARD ORGANISATION
WFD	WHEEL FLAT DETECTOR
RMPU	ROOF MOUNTED PACKAGE UNIT
FRP SLEEPER:FIBRE REINFORCED PLASTIC SLEEPER	
NETRA CAR	NETWORK OF ELECTRIFICATION, TESTING, RECORDING APPARATUS CAR
RITES	RAIL INDIAN TECHNICAL AND ECNOMIC SERVICE LIMITED
MRTS	MASS RAPID TRANSIT SYSTEM
MMTS	MULTI MODEL TRANSPORT SYSTEM
IRBT CORRIDOR : INTEGRATED RAIL – CUM BUS TRANSIT CORRIDOR	
ICD	INLAND CONTAINER DEPOT
CFS	CONTAINER FREIGHT STATION
TEU	TWENTY FEET EQUIVALENT UNIT
FEU	FORTY FEET EQIVALENT UNIT
ADD	AUTO DRIVING DEVICE
RO-RO	ROLL ON ROLL OFF
CRIS	CENTRE FOR RAILWAY INFORMATION SYSTEM
RMS	RAKE MANAGEMENT SYSTEM
CONCERT	COUNTRY WIDE NETWORK OF COMPUTERISED ENHANCED RESERVATION AND TICKETING
PRS	PASSENGER RESERVATION SYSTEM
RSC	RAILWAY STAFF COLLEGE
IRICEN	INDIAN RAILWAY INSTITUTE OF CIVIL ENGINEERING
IRICON	INDIAN RAILWAY CONSTRUCTION CO., LTD
RRB	RAILWAY RECRUITMENT BOARD.
RCT	RAILWAY CLAIMS TRIBUNAL
RRT	RAILWAY RATES TRIBUNAL
MTP	METROPOLITAN TRANSPORT PROJECTS
RTM	RAILWAY TRANSPORT MUSEUM

RLO	RAILWAY LIAISON OFFICER
CAMTECH	CENTRE FOR ADVANCED MAINTENANCE TECHNOLOGY
RITES	RAIL INDIAN TECHNICAL AND ECONOMIC SERVICES LTD.
KRC	KONKAN RAILWAY CORPORATION
ICF	INTEGRAL COACH FACTORY
CLW	CHITTARANJAN LOCOMOTIVE WORKS
DLW	DIESEL LOCOMOTIVE WORKS
DCW	DIESEL COMPONENT WORKS
RSK	RAIL SPRING KARKANA
FOIS	FREIGHT OPERATIONS INFORMATION SYSTEM
CRB	CHAIRMAN RAILWAY BOARD
COM	CHIEF operations Manger
MT	MEMBER TRAFFIC
GM	GENERAL MANAGER
IRCA	INDIAN RAILWAY CONFERENCE ASSOCIATION
MPA	MACHINE PREPARED ABSTRACT
RTSA	RAIL TRAVEL SERVICE AGENT
MR CELL	MONITORING CELL
NR CELL	NON RECEIPT CELL
LVCD	LAST VEHICLE CHECK DEVICE
FRED	FLASHING REAR END DEVICE
ACT	ANTI COLLUSION DEVICE
APM	ADMINISTERED PRICING MECHANISM
CRS	CARRIAGE REPAIR SHOP
CRS	COMMISSIONER OF RIALWAY SAFETY.

MATHS (ADDITION)

1. The railways distributed the following articles in a Railway School during 2004-05. A TV set costs Rs. 12,258, a VCR costs Rs. 12,575 and a water cooler at the cost of Rs. 5,757. What is the total cost of the articles?

Cost of TV.	-	Rs. 12,258.00
Cost of VC R	-	Rs. 12,575.00
Cost of Water cooler	-	Rs. 5,757.00
Total cost	-	Rs. 30,580.00

2. An exhibition was held at Secunderabad on Sunday, Monday, Tuesday and Wednesday. The number of employees who visited the exhibition was 517,2928, 1648,2452. How many employees visited the exhibition.

Number of employees visited on Sunday	-	517
Number of employees visited on Monday	-	2928
Number of employees visited on Tuesday	-	1648
Number of employees visited on Wednesday	-	2452
Total number of employees visited	-	7545

3. A person has three daughters, Bindu, Indu and Swathi. He gave Rs. 3,42,506 to Bindu, Rs. 2,68,372 to Indu and Rs. 1,75,429 to Swathi. Fin the total money he has given to his three daughters.

Bindu	-	Rs. 3,42,506.00
Indu	-	Rs. 2,68,372.00
Swathi	-	Rs. 1,75,429.00
Total Amount	-	Rs. 7,86,307.00

4. A cycle merchant brought 25 cycles and paid Rs. 20,000 and promised to pay remaining amount of Rs. 1,250 later. If so find the cost of one cycle?

Amount paid for 25 Cycles	=Rs 20,000
Amount to be paid	= Rs 1,250
Total Amount for 25	= Amount paid + amount to be paid
Cycles	= Rs 21,250
Therefore cost of one cycle	= Total amount/No of Cycles
	= 21250/25
	= Rs 850
Cost of one cycle	=Rs 850.

5. If 52 TV sets cost Rs. 6,40,380 find the cost of each TV set.

Cost of 52 TV sets	= Rs 6,40,380
No of TV sets	= 52 sets
Cost of each TV set	= Total cost of 52 TV sets/No of TVs
	= 640380/52
	= Rs 12315

6. The cost of 25 buffaloes is Rs. 65,925 find the cost of one buffalo.
   Cost of 25 buffaloes = Rs 65,925
   No of buffaloes = 25
   Cost of each buffalo = Total cost of 25 buffaloes /No of buffaloes
   = 65,925/25
   = Rs 2637

7. If a passenger purchased tickets worth Rs. 7250/- If one ticket cost Rs. 125. Find the number of ticket purchased.
   Cost total Tkts = Rs 7250/-
   Cost of one TKT = Rs 125/-
   Number of Tickets Purchased = Cost total Tkts /cost of one TKT
   = 7250/125
   = Rs 58

MULTIPLICATION

8. An employee gets Rs. 800/- as consolidated pay. If 43 are working find the amount to be paid?
   Consolidated pay of the employee = Rs 800.
   No of employees working = 43
   Total amount to be paid = pay of the employee x No of employees
   = 800 x 43
   = Rs 34400.
9. The Government paid to each family, which lost house due to floods Rs. 550/- find the amount required to give 120 families?
   Amount paid to the each family = Rs 550
   No of families =120
   Amount required for 120 families =
   amount paid to each family x No. of families
   = 550 x 120
   =Rs 66000
10. If a bag of rice cost Rs. 890/- what is the cost of 45 bags?
    Cost of one rice bag = Rs 890
    Total no of bags =45