

Questions with Answer for 'KAVACH'

Multiple choice questions :-

1. **What is the name of the indigenous Automatic Train Protection (ATP) system developed by Indian Railways?**
a) ETCS-1 b) **Kavach** c) IRSEM d) LTE
2. **What is the primary purpose of the Kavach system?**
a) To reduce signal failures b) **To enhance train safety and prevent collisions.**
c) To Reduce TSR . d) To reduce PSR
3. **Kavach is being implemented on sections with which type of signaling?**
a) Semaphore signaling. b) Multiple Aspect Semaphore Signaling.
c) **Multi Aspect Colour Light Signaling** d) Manual signaling.
4. **For train speeds beyond what speed is an ATP system with Cab Signaling compulsory in Indian Railways?**
a) 100 KMPH b) 120 KMPH c) **140 KMPH** d) 160 KMPH
5. **Kavach uses which frequency?**
a) LTE b) Wi-Fi c) **UHF spot frequencies (MComm)** d) Bluetooth
6. **Where are RFID tags typically fastened?**
a) On the locomotive's roof b) **On track sleepers**
c) Inside the station master's office d) On the radio tower
7. **What is the primary function of the Stationary Kavach Unit?**
a) To read RFID tags b) To display information to the Loco Pilot
c) **To receive signaling information and send messages to locomotives**
d) To apply the train's brakes
8. **What does the DMI (Driver Machine Interface) do?**
a) It applies the brakes. b) **It displays real-time track information to the Loco Pilot.**
c) It reads RFID tags. d) It manages the radio communication.
9. **Which component automatically applies the brakes when needed?**
a) RFID Reader b) Loco Kavach Vital Computer
c) **Brake Interface Unit (BIU)** d) Loco Kavach Radio Unit
10. **What is the purpose of the Network Monitoring System (NMS)?**
a) To secure movement authorities. b) To display information to the Station Master.
c) **To log train movements and fault messages.** d) To read RFID tags.
11. **Where is the Stationary Kavach Unit located?**
a) In the locomotive cab b) **In the relay/electronic interlocking room.**
c) On the track sleepers d) Under the locomotive
12. **What is the function of the RFID reader?**
a) To transmit radio signals. b) **To read information from RFID tags.**
c) To display information to the Station Master. d) To apply the train brakes.
13. **What is the function of the Key Management System (KMS)?**
a) To log train movements. b) **To secure the exchange of movement authorities.**
c) To display track information to the driver. d) To read RFID tags.
14. **What is the "Movement Authority" (MA)?**
a) The speed of the train. b) **The distance a train is permitted to travel safely.**
c) The location of the next station. d) The braking distance of the train.
15. **What is the "End of Authority" (EoA)**
a) The speed limit of the train. b) **The location where the train's target speed is zero**
c) The distance the train has traveled. d) The time the train is allowed to travel.
16. **How often do Station Kavach and Loco Kavach units communicate?**
a) Every 5 seconds. b) Every 10 seconds. c) Every 1 second. d) **Every 2 seconds.**

- 17. What does the "Dynamic Speed Profile" depend on?**
 a) The color of the signals. **b) The train's braking characteristics and length.**
 c) The number of passengers d) The time of day.
- 18. What does the "Static Speed Profile" represent?**
 a) The train's current speed. b) The average speed of the train.
c) Permanent speed restrictions along the track. d) The dynamic change of speed.
- 19. Kavach system uses what type of communication for exchanging information?**
 a) wired communication. b) optical communication.
c) radio communication. d) satellite communication.
- 20. What buttons does the Station Master press simultaneously to generate an SOS signal?**
 a) Cancel and TSR-ACK **b) SOS and Common** c) TSR-ACK and Common d) Cancel and SOS
- 21. Within what radius from the SOS generating Station Kavach will the brakes be applied automatically?**
 a) 1000m b) 2000m **c) 3000m** d) 4000m
- 22. What button does the SM press to acknowledge the display screen and buzzer?**
 a) Common b) Cancel **c) TSR-ACK** d) SOS
- 23. What happens to the train speed after the Loco Pilot acknowledges the SOS and the train is moving again?**
 a) Train speed is unrestricted. b) Train speed is supervised by KAVACH for 60kmph.
c) Train speed is supervised by KAVACH for 30kmph. d) Train speed is supervised by KAVACH for 10kmph.
- 24. What is the default mode when Kavach is powered on?**
 a) Full Supervision Mode (FS) b) Staff Responsible Mode (SR)
c) Standby Mode (SB) d) Onsight Mode (OS)
- 25. In which mode is the Loco Pilot responsible for respecting lineside information?**
 a) Full Supervision Mode (FS) **b) Staff Responsible Mode (SR)**
 c) TRIP Mode (TR) d) Shunt Mode (SH)
- 26. Which mode automatically applies emergency brakes when passing a signal at ON?**
 a) Onsight Mode (OS) b) Limited Supervision Mode (LS)
c) TRIP Mode (TR) d) Post Trip Mode (PT)
- 27. What is the default speed limit in Shunt Mode?**
 a) 25 kmph b) 30 kmph **c) 15 kmph** d) 50 kmph
- 28. Which mode is used for reverse movement without cab change?**
 a) Non-Leading Mode (NL) **b) Reverse Mode (RV)**
 c) Isolation Mode (IS) d) Shunt Mode (SH)
- 29. Which among the following is supervised by Kavach in SR mode:-**
 a) Next signal position b) next signal aspect **c)MPS of loco** d) MPS of train
- 30. What is the function of the DMI?**
 a) To apply brakes. **b) To display information to the Loco Pilot.**
 c) To read RFID tags. d) To transmit radio signals.
- 31. What is the maximum speed permitted in Onsite Mode after signal override?**
 a) 20 kmph **b) 15 kmph** c) 30 kmph d) 40kmph
- 32. Which mode is used for slave engine management?**

- a) Reverse Mode (RV) b) Shunt Mode (SH) c) **Non Leading mode (NL)** d) Isolation mode (IS)
- 33. Which mode is entered when there is a fault affecting the Kavach system?**
a) Isolation mode (IS) b) **System Failure mode (SF)**
c) Post Trip mode (PT) d) Limited Supervision mode (LS)
- 34. What is the maximum permissible speed in OS mode:-**
a) 15 KMPH b) 30KMPH c) 60 KMPH d) **MPS**
- 35. After passing 2 RFID tag SR mode is converted into**
a) **OS mode** b) FS mode c) Shunt mode d) LS mode
- 36. Default distance in RV mode is :-**
a) 300 meters b) **500 meter** c) 700 meters d) 1000 meters
- 37. Default timing in RV mode is :-**
a) 100 second ii) 200 second **iii) 300 second** iv. 500 second.
- 38. If calling –on- signal is taken OFF , The on- board Kavach system enters into :-**
a) SR mode b) **OS mode** c) LS mode d) FS mode.
- 39. During SOS generation which among the following actions should be done by SM:-**
a) Put Back all Signals b) Put back Home signal only c) Put back starter signal only
d) No action required.
- 40. After tripping of loco due to SPAD , Post Trip Mode is converted into OS mode by pressing which buttons:-**
a. OVRD+CONF. b) OS +CONF c) Shunt +CONF d) SR +CONF

Fill in the blanks questions :-

- Category (I) of Kavach protection focuses on protection against inadequate braking by the_____. (LP)
- Protection against SPAD and over-speeding falls under Category_____. (I)
- Protection against hitting a derailed train falls under Category_____.(II)
- Category (I) protections are guaranteed as long as the____Kavach system is functional. (Loco)
- Category (II) protections are not_____. (Guaranteed)
- Direct On board **-to-On board** communication is crucial for some_____ protections. (collisions like- head on, rear end and side collisions)
- RFID tags are used to provide some protections in Category_____. (II)
- Protection against Rollback of Train falls under category_____. (I)
- Protection when SOS is generated falls under category _____.(II)
- Kavach uses a_____network for information exchange. (Radio communication)
- Each radio channel has its own cable and _____(antenna)
- A radio communication failure timeout occurs when data is not received within the communication mandatory area for_____in Absolute Block Sections.(30)
- A radio communication failure timeout occurs when data is not received within the communication mandatory area for_____in Automatic Block Sections. (10)
- Kavach allows direct communication between_____Kavach systems. (LOCO AND STATION)
- The_____is installed on the Station Master's table or a nearby place. (SM-OCIP)
- Station Master's operations pertaining to SM-OCIP shall be incorporated in_____of the Station Working Rules (SWR). (appendix-c)

17. The Station Master can monitor the statuses of SOS reception, SOS generation, and _____ through LED indications. (received)
18. All operations on SMOCIP can be performed only when the _____ is inserted and turned to 'IN' position. (SM-Key)
19. The on-duty SM is responsible for operation of SM-OCIP and safe custody of _____. (keys)
20. After Post Trip mode, Kavach enters into _____ mode on pressing OVRD+CONF. button. (OS)
21. From OS mode after passing one stop signal at OFF, The loco loco kavach will enter into _____ mode. (FS)
22. Kavach equipment shall log the events of sending and receiving of SOS in the _____. (Event logger)
23. The SOS signal gets cancelled by pressing the _____ and Common buttons simultaneously. (cancel)
24. After the train is brought to STOP DEAD (STANDSTILL), Loco Pilot shall _____ the SOS, for releasing the brakes. (Acknowledge)
25. The three SM-OCIP makes used at present are Medha, Kernex, and (HBL)
26. A log of every failure displayed and its restoration has to be maintained in a separate register and information to be given to _____ department. (S&T)
27. The _____ Mode is the default mode when the Kavach unit is switched on. (Standby)
28. In _____ Mode, Kavach supervises train movements against a dynamic speed profile. (FS)
29. In RV mode the maximum allowed speed is _____. (25 KMPH)
30. The _____ Kavach Unit is located in Relay Room/ Electronic Interlocking Room. (stationary)
31. The _____ is a display panel in the locomotive cab that provides real-time information. (DMI)
32. When a Calling-on signal taken OFF, the system enters into _____ mode. (OS)
33. The Loco Pilot shall isolate Kavach when the system is in _____ mode. (system failure)
34. The _____ is placed underneath the Locomotive to read the RFID tags. (RFID Reader)
35. The _____ Speed Profile represents fixed speed restrictions along the track. (static)
36. The _____ manages the Kavach unit of a slave engine. (non-leading mode)
37. The _____ ensures secure exchange of Movement Authorities. (key management system)
38. The _____ is used to cancel the SOS signal. (CANCEL and COMMON button)
39. To pass a defective signal at ON _____ button is pressed by the Loco Pilot. (OVRD+CNFM)

40. The _____ is used for shunting movements.(SM Mode)