

***** EXAMINATION *****

FIRE DETECTION FOR CONVEYOR BELT ENTRIES

1. **One of the most severe hazards in underground coal mining is**
 - a) the equipment
 - b) the chemicals
 - c) the fires
 - d) the air

2. **The large-scale experiments for belt detection were conducted**
 - a) in the Bureau's fire gallery at Lake Lyn Laboratory
 - b) in the underground of Lake Lyn Laboratory
 - c) in the lobby of Lake Lyn Laboratory
 - d) in the tunnel of Lake Lyn Laboratory

3. **Which belt is non fire resistant?**
 - a) Belt R1
 - b) Belt R2
 - c) Belt R11
 - d) Belt P1

4. **The most widely measured smoke property is**
 - a) light extinction coefficient (K)
 - b) smoke optical density (D)
 - c) Both a and b
 - d) None of the above

5. **Belts that were pass the test and considered fire-resistant are**
 - a) R1
 - b) R4
 - c) P1
 - d) All of the above

6. **What will happen if the conveyor belt stopped?**
 - a) the coal fire spreads to the conveyor belt
 - b) the coal fire decrease to the conveyor belt
 - c) the coal fire increase the level of smoke
 - d) the coal fire intensity begins to increase

7. **How many stages do the typical fires in belt entries develop?**
 - a) one
 - b) two
 - c) three
 - d) four
8. **How many array of thermocouples connected in parallel?**
 - a) 8
 - b) 10
 - c) 12
 - d) 14
9. **To transmit the data to a computer for storage, use a**
 - a) 50 channel microprocessor
 - b) 60 channel microprocessor
 - c) 80 channel microprocessor
 - d) 100 channel microprocessor
10. **For open, flaming fires, the generation rates of CO and smoke**
 - a) depends upon the total heat-release rates
 - b) depends upon the total heat-suppression rates
 - c) depends upon the total heat-ignition rates
 - d) All of the above
11. **Which is not true about the PVC conveyor belting test?**
 - a) P1 belt was more readily ignitable than the SBR belt
 - b) P1 belt did not propagate flame
 - c) P1 belt decreases the flame
 - d) All of the above
12. **Constructed from nominal 5-cm-diameter steel pipe, had a four**
 - a) inlet port is the water and air sample averaging probe
 - b) inlet port is the gas and smoke sample averaging probe
 - c) inlet port is the oil and noise sample averaging probe
 - d) inlet port is the fire and water sample averaging probe
13. **Maintaining slippage switches to reduce the occurrence of**
 - a) frictional heating reduces the development of the fire
 - b) power outburst reduces the development of the fire
 - c) coal spillage reduces the development of the fire
 - d) power shortage reduces the development of the fire
14. **The junction along a belt entry is a**
 - a) fire splits
 - b) belt splits
 - c) water splits
 - d) air splits

15. **The fire may grow in intensity during the**
- a) smoldering stage
 - b) late flaming stage
 - c) coal spillage stage
 - d) early flaming stage
16. **The R11 rates of generation of CO is available with a**
- a) smoke production constant value of 5.68
 - b) smoke production constant value of 5.86
 - c) CO production constant value of 5.68
 - d) CO production constant value of 5.88
17. **The minimum alarm actuation temperature for a point-type**
- a) heat sensor is at 130 Degrees Fahrenheit
 - b) heat sensor is at 135 Degrees Fahrenheit
 - c) heat sensor is at 140 Degrees Fahrenheit
 - d) heat sensor is at 145 Degrees Fahrenheit
18. **Once the small coal fire ignites the belt, the total heat will**
- a) increases due to the extra coal supplied by the SBR belt
 - b) decreases due to the extra coal supplied by the SBR belt
 - c) increases due to the extra fuel supplied by the SBR belt
 - d) decreases due to the extra fuel supplied by the SBR belt
19. **The early warning capability of CO and smoke sensors are degraded**
- a) if fire sensors are installed in entries with junctions
 - b) if fire sensors are installed in entries with crosscuts
 - c) if fire sensors are installed in entries with splits
 - d) if fire sensors are installed in entries with leaks
20. **When parallel entries contain crosscuts, the crosscuts exist on**
- a) first rib of each entry
 - b) second rib of each entry
 - c) third rib of each entry
 - d) fourth rib of each entry

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