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RRB ALP 2018 CBT-2 Heat Engine

Assistant Loco Pilot & Technicians · CEN 01/2018 · CBT-2 (21-23 Jan 2019) · Trade: Heat Engine · Part B (Heat Engine) · Question Paper

English

Complete Paper · 75 Questions · Part B (Heat Engine) Section · Official Answer Key

About this Compilation

This booklet contains the complete question paper of the **RRB ALP 2018 CBT-2 Heat Engine** examination in **English** (**Part B (Heat Engine)** section only), with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

Source. Original images of the official RRB response sheets (no retyping). Paper = Part A 100 (Maths, Reasoning, Basic Science & Engineering, Current Affairs) + Part B 75 (trade).

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear section by section in the order of the paper, numbered 1 onward.
- Diagram and wide-table questions appear at full width at the end of their section.
- The correct answer is highlighted in green with a tick.

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Index — All Sets (click to open)

Set 1
23 Jan 2019
4:30 PM - 7:00 PM

Part B (Heat Engine) 75 Questions • Answer Key

Q1 Part B (Heat Engine)

Vernier depth gauge is used for measuring

A. Internal dimension

B. Step, depth of blind hole ✓

C. Pitch circle diameter

D. Round dimension

Q2 Part B (Heat Engine)

Much of the heat in the exhaust gases may be recovered by the use of – Choose the correct option.

A. Tail pipe

B. Muffler

C. Manifold

D. Heat-exchanger ✓

Q3 Part B (Heat Engine)

In starting of diesel engines by electric starting what is used to supply power to the starter motor?

A. Generator

B. Battery ✓

C. Rectifier

D. Dynamo

Q4 Part B (Heat Engine)

A governor is a

A. Temperature sensitive device

B. Vacuum sensitive device

C. Speed sensitive device ✓

D. Pressure sensitive device

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Q5 Part B (Heat Engine)

Air lock in fuel line will cause - Choose the correct answer.

A. Injector pressure is too high

B. Late starting and erratic running ✓

C. Engine idling high

D. Excess delivery from FI pump

Q6 Part B (Heat Engine)

The stroke of an engine is - Choose the correct answer.

A. Length of the connecting rod

B. Inside diameter of the cylinder

C. Distance between t.d.c and b.d.c

D. Volume of the cylinder ✓

Q7 Part B (Heat Engine)

In a diesel engine feed pump is located on - Choose the correct answer.

A. F.I.P ✓

B. Fuel filter

C. Cylinder head

D. Fuel tank

Q8 Part B (Heat Engine)

What is the other name for Jenny spanners ?

A. Inside caliper

B. Odd-leg caliper

C. Outside caliper

D. Joint spanner ✓

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Q9 Part B (Heat Engine)

Why is free play in clutch needed

A. to prevent the clutch from heating up ✓

B. to improve efficiency of braking

C. to facilitate lubrication by oil

D. to increase speed of engine rpm

Q10 Part B (Heat Engine)

Ammeter is used to measure - Choose the correct answer.

A. resistance

B. Power

C. Current ✓

D. Voltage

Q11 Part B (Heat Engine)

A depth micrometer can be used to measure _____.

A. Length of the bore

B. Thickness of the bore

C. Diameter of bore ✓

D. Roundness of the bore

Q12 Part B (Heat Engine)

The SI unit of pressure is - Choose the correct answer.

A. Pascal ✓

B. Newton

C. Joule

D. Dyne

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Q13 Part B (Heat Engine)

Identify the the material used for twist drill.

A. Mild steel

B. Carbide steel

C. Alloy steel

D. H.S.S ✓

Q14 Part B (Heat Engine)

The connecting rod is made up of - Choose the correct answer.

A. Cast iron

B. Aluminium

C. Mild steel

D. Alloy steel ✓

Q15 Part B (Heat Engine)

The diesel engine usually emits excessive smoke during – Choose the correct option.

A. Idling

B. Decelerating

C. Starting

D. Accelerating ✓

Q16 Part B (Heat Engine)

The operation of the governor can only be effective if the system is air tight which type of governor is this ?

A. Hydraulic

B. Servo

C. Mechanical

D. Pneumatic ✓

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Q17 Part B (Heat Engine)

In diesel cycle combustion takes place at - Choose the correct answer.

A. Constant volume

B. Constant temperature and pressure

C. Constant temperature

D. Constant pressure ✓

Q18 Part B (Heat Engine)

Which one of the following fuel injection systems was originally used in large stationary and marine engines and is now seldom used?

A. Solid injection

B. Mechanical injection

C. Airless injection

D. Air injection ✓

Q19 Part B (Heat Engine)

Clearance between mating parts is measured by - Choose the correct option

A. Caliper gauge

B. Dial gauge

C. Feeler gauge ✓

D. "Go" gauge

Q20 Part B (Heat Engine)

Micrometer can measure upto _____

A. Least count ✓

B. 0.005 mm

C. 0.1 mm

D. Microns size

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Q21 Part B (Heat Engine)

Higher efficiency can be achieved of an OTTO cycle by increasing the _____.

A. compression ratio ✓

B. Cylinder size

C. Fuel intake

D. stroke length

Q22 Part B (Heat Engine)

Piston rings are generally made of-Choose the correct answer.

A. Aluminium

B. Cast iron ✓

C. Brass

D. Copper

Q23 Part B (Heat Engine)

Cyaniding and nitriding are two methods of - Choose the correct answer.

A. Normalising

B. Case hardening ✓

C. Tempering

D. Hardening

Q24 Part B (Heat Engine)

What is drawn in the cylinder of diesel engine during suction stroke?

A. Pure air alone ✓

B. CNG gas

C. A mixture of air and fuel

D. Diesel

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Q25 Part B (Heat Engine)

A cutting tool used to finish and enlarge a hole is known as-Choose the correct answer.

A. Die

B. Drill

C. reamer ✓

D. Tap

Q26 Part B (Heat Engine)

When tolerance is given on one side of the basic dimension it is called - Choose the correct answer.

A. Tolerance system

B. Unilateral tolerance ✓

C. Bilateral tolerance

D. Allowance system

Q27 Part B (Heat Engine)

The principle of a radiator of an engine cooling system is to - Choose the correct answer.

A. Acts as a reservoir for the water

B. Spread out the hot water over a large area ✓

C. Increase the air speed as it flows over the hot surface

D. Cause a heat flow by convection currents

Q28 Part B (Heat Engine)

The instrument used to measure high temperature in the furnace is-Choose the correct answer.

A. pyrometer ✓

B. Barometer

C. Thermometer

D. Colorimeter

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Q29 Part B (Heat Engine)

Belt slackness is due to _____ - Choose the correct answer.

A. Worn sprocket

B. Worn chain

C. Worn shaft ✓

D. Worn gear

Q30 Part B (Heat Engine)

What is the material used for making Pistons?

A. Galvanised Copper

B. Steel

C. Aluminum Alloy ✓

D. Brass

Q31 Part B (Heat Engine)

What is the part of the universal surface gauge which helps to draw a parallel line along a dotted edge known as?

A. Scriber

B. Guide pins ✓

C. Fine adjusting screw

D. Center punch

Q32 Part B (Heat Engine)

Why is air cleaner filled with oil?

A. To pressurize

B. To accelerate

C. To prevent dust and dirt from atmosphere ✓

D. To lubricate

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Q33 Part B (Heat Engine)

What is the principle on which brakes work?

A. Dragging

B. Vibration

C. Suction

D. Friction ✓

Q34 Part B (Heat Engine)

The air filters used in high speed diesel engines are generally of the type - Choose the correct answer.

A. Impingement filters

B. Heaters

C. Dry filters

D. Oil bath filters ✓

Q35 Part B (Heat Engine)

Wire gauge is a measurement of a wire's - Choose the correct answer.

A. Hardness

B. Tensile strength

C. Diameter ✓

D. brittleness

Q36 Part B (Heat Engine)

A cutting tool used to cut outside threads is called - Choose the correct answer.

A. Drill

B. Die ✓

C. Reamer

D. tap

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Q37 Part B (Heat Engine)

A maintenance free battery - Choose the correct answer.

- A. Has lead-calcium plate grid ✓
- B. Does not contain water
- C. Has lead-antimony plate grid
- D. Does not contain acid

Q38 Part B (Heat Engine)

A mechanism used to control the speed of an engine is called -Choose the correct answer.

- A. Governor ✓
- B. Regulator
- C. Speedometer
- D. Odometer

Q39 Part B (Heat Engine)

The purpose of dynamo is – Choose the correct option.

- A. Convert mechanical energy into electrical energy
- B. Continually recharge the battery ✓
- C. Act as reservoir of electrical energy
- D. Supply electric power

Q40 Part B (Heat Engine)

While using the vernier height gauge ,it must be placed on _____- Identify

- A. Vee block
- B. Surface plate ✓
- C. Cylinder head
- D. Crank shaft

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Q41 Part B (Heat Engine)

The purpose of the injector provided on a diesel engine is to inject -Choose the correct answer.

A. Lubricant in the cylinder

B. Fuel in the cylinders ✓

C. Lubricant in the bearings

D. Coolant in the cylinder jacket

Q42 Part B (Heat Engine)

The angle of a drill bit is _____

A. 118^{o}

B. 119^{o}

C. 59^{o} ✓

D. 115^{o}

Q43 Part B (Heat Engine)

What is the composition of Gun metal?

A. Copper ,Zinc and nickel

B. Lead and zinc

C. Copper, Tin and zinc ✓

D. Lead and nickel

Q44 Part B (Heat Engine)

A fuse in an electrical circuit 'blows' as a result of a high - Choose the correct option

A. Voltage caused by a short circuit

B. Voltage caused by an open circuit

C. Current flow caused by a short circuit ✓

D. Current flow caused by an open circuit

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Q45 Part B (Heat Engine)

The tool, which is used for laying out diameter is

- A. Divider ✓
- B. Scriber
- C. Outside micrometer
- D. Tri square

Q46 Part B (Heat Engine)

Identify the instrument used for checking flatness and squareness of a surface?

- A. Centre punch
- B. Go Gauge
- C. Vernier height gauge
- D. Try square ✓

Q47 Part B (Heat Engine)

Scavenging is done to maintain - Choose the correct answer.

- A. Speed
- B. Power output ✓
- C. Oil pressure
- D. Fuel consumption

Q48 Part B (Heat Engine)

The study of pneumatics deals with systems operated with - Choose the correct answer.

- A. Solid material
- B. Oil
- C. Air ✓
- D. Water

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Q49 Part B (Heat Engine)

The device, which is used to measure the brake power of an engine is called - Choose the correct answer.

A. Dynamo meter ✓

B. Torque wrench

C. Energy meter

D. Indicator

Q50 Part B (Heat Engine)

The coolant used for reaming aluminum work piece is - Choose the correct option

A. Water

B. Lard oil

C. Air pressure

D. Kerosene ✓

Q51 Part B (Heat Engine)

The ratio between BHP and IHP is called - Choose the correct answer.

A. Engine efficiency

B. Thermal efficiency

C. Power efficiency

D. Mechanical efficiency ✓

Q52 Part B (Heat Engine)

To increase output voltage, battery cells are connected in - Choose the correct answer.

A. Series ✓

B. Parallel

C. Series-parallel

D. inclined

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Q53 Part B (Heat Engine)

A lubricant oil is needed to run the machine_____

A. With increased friction

B. Without noise ✓

C. quickly

D. With cleanliness

Q54 Part B (Heat Engine)

Water circulation in a thermo-syphon cooling system is caused by-Choose the correct option

A. Conduction currents

B. A belt driven water impeller

C. A gear driven water pump

D. The change in density of the water ✓

Q55 Part B (Heat Engine)

A rivet is specified by the diameter of its-Choose the correct answer.

A. Tail

B. Head

C. length

D. Shank ✓

Q56 Part B (Heat Engine)

The vernier caliper is used for measuring-

A. Roundness

B. Flatness

C. Shape

D. Thickness ✓

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Q57 Part B (Heat Engine)

A hole is drilled between the crankshaft main journal and crank pin for - Choose the correct option

- A. Lubricating the connecting rod bearings ✓
- B. Reducing crankshaft weight
- C. Balancing the crank shaft
- D. Reducing the crank shaft vibrations

Q58 Part B (Heat Engine)

The instrument used to measure cylinder bore diameter is - Choose the correct answer.

- A. Vernier caliper
- B. Bore dial gauge ✓
- C. Telescopic gauge
- D. Outside micrometer

Q59 Part B (Heat Engine)

Which of the following are not symptoms of poor clutch operation

- A. increase in engine noise when pedal press ✓
- B. Vibration of engine
- C. Difficulty in gear shifting when pedal press
- D. pedal gets stuck when pressed

Q60 Part B (Heat Engine)

Which of the following is a part of the combination set?

- A. Socket spanners ✓
- B. Square head
- C. Protractor head
- D. Steel rule

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Q61 Part B (Heat Engine)

The ignition condenser - Choose the correct option

A. Increases contact arcing

B. Protects plugs from load

C. Reduces secondary spark

D. Reduces arcing at contacts ✓

Q62 Part B (Heat Engine)

The rate of doing work is called - Choose the correct answer.

A. Force

B. Energy

C. Torque

D. Power ✓

Q63 Part B (Heat Engine)

The grooves provided on the entire length of the body of a twist drill are called - Choose the correct answer.

A. Margins

B. Lips

C. Flutes ✓

D. webs

Q64 Part B (Heat Engine)

Air fuel mixture in a petrol engine is burnt in - Choose the correct answer.

A. Piston

B. Exhaust manifold

C. Intake manifold

D. Cylinder ✓

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Q65 Part B (Heat Engine)

A noise produced in the cylinder of a diesel engine during combustion, usually when the fuel oil has a low ignition quality is called - Choose the correct answer.

A. Fuel explosion

B. Fuel burst

C. Fuel knock ✓

D. Fuel thrust

Q66 Part B (Heat Engine)

In diesel engine the fuel is ignited by - Choose the correct answer.

A. A spark plug

B. A glow plug

C. Virtue of temperature of compressed air ✓

D. An injector

Q67 Part B (Heat Engine)

The function of alternator in a vehicle is to - Choose the correct answer.

A. Charge the battery ✓

B. Discharge the battery

C. Measure the current

D. Measure the voltage

Q68 Part B (Heat Engine)

To measure the cylinder bore one of these instrument is used. Identify

A. Screw gauge

B. Caliper

C. Micrometer

D. Dial indicator ✓

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Q69 Part B (Heat Engine)

The purpose of thermostat is to keep the engine - Choose the correct answer.

A. At desired temperature ✓

B. Warm

C. Hot

D. Cool

Q70 Part B (Heat Engine)

Indicated work per cycle is equal to - Choose the correct answer.

A. Mean effective pressure x stroke volume ✓

B. Mean effective pressure x stroke length

C. Mean effective pressure x bore arc

D. Mean effective pressure x bore diameter

Q71 Part B (Heat Engine)

The electronic ignition system is triggered on and off through_____.

A. Permanent magnet

B. Diode

C. Contact breaker

D. Trigger ✓

Q72 Part B (Heat Engine)

The point angle of twist drill for general purposes is - Choose the correct answer.

A. 90^0

B. 60^0

C. 135^0

D. 118^0 ✓

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Q73 Part B (Heat Engine)

The drive for the diesel fuel feed pump is taken from the - Choose the correct option

A. Fuel injection camshaft ✓

B. Engine camshaft

C. Timing gears

D. Crankshaft

Q74 Part B (Heat Engine)

Identify the point angle of a Centre punch from the given options.

A. 120^{o}

B. 30^{o}

C. 90^{o} ✓

D. 60^{o}

Q75 Part B (Heat Engine)

An air chisel is used to brake or cut metal objects apart. How is it operated?

A. Hydraulically

B. Pneumatically ✓

C. Frictionally

D. Magnetically

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