



CONSTRUCTION  
INDUSTRY COUNCIL  
建造業議會

# Ground Investigation Operator Skilled Trade Test Mock Written Test Paper

此文件關於岩土勘探工工藝測試考題。如有需要索取此文件的中文版本，請致電 2100 9232 與工藝測試中心聯絡。

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## Knowledge of equipment, tools and facilities

1. The size of casing with 115mm (4-1/2") external diameter is :
  - (a) NW
  - (b) HW
  - (c) PW
  - (d) SW
  
2. The size of casing with 101 mm (4") internal diameter is :
  - (a) NW
  - (b) HW
  - (c) PW
  - (d) SW
  
3. The standard weight of the free fall hammer of automatic trip hammer is :
  - (a) 45.5kg. ( 100lbs )
  - (b) 54.5kg. ( 120lbs )
  - (c) 59.0kg. ( 130lbs )
  - (d) 63.5kg. ( 140lbs )
  
4. The internal diameter of S.P.T. split spoon sampler is :
  - (a) 20mm ( 3/4" )
  - (b) 25mm ( 1" )
  - (c) 40mm ( 1-1/2" )
  - (d) 50mm ( 2" )

5. The length of plastic liner for 'MAZIER 101' triple tube swivel type core barrel is :
- (a) 1.00m ( 3'-3" )
  - (b) 1.50m ( 4'-11" )
  - (c) 1.80m ( 5'-11" )
  - (d) 2.50m ( 8'-2" )
6. The total length of 1.50m TNW size double tube swivel type core barrel including impregnated diamond bit and rod adaptor is :
- (a) 1.5m ( 4'-11" )
  - (b) 1.95m ( 6'-5" )
  - (c) 2.50m ( 8'-2" )
  - (d) 3.00m ( 9'-10" )
7. The function of retractable system ( spring ) located inside the barrel head of 'MAZIER 101' triple tube swivel type core barrel is :
- (a) to protect the integrity of soil sample
  - (b) for the smooth passing of flush water
  - (c) to adjust the length of protrusion of cut shoe according to the change of hardness of soil stratum encountered
  - (d) to protect the tungsten carbide bit from wear and tear
8. The function of bearing assembly located inside the barrel head of double tube swivel type core barrel is :
- (a) for passing of flush water
  - (b) to keep the vertically of inner tube
  - (c) to connect barrel head and inner tube
  - (d) to idle the inner tube from rotation during drilling operation

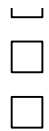
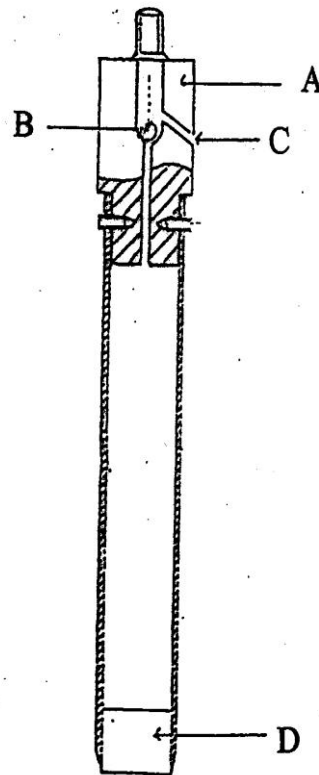
9. The function of barrel head assembly of double tube swivel type core barrel is/are :

- (1) to connect barrel and drill strings
- (2) to connect outer tube and inner tube
- (3) to assist the retrieve of rock core from core barrel
- (4) to increase the penetration rate of impregnated diamond bit

- (a) 1
- (b) 1 and 2
- (c) 3
- (d) 3 and 4

10. The name of part 'D' in the following drawing denotes :

- (a) U100 sampler head
- (b) bolt
- (c) U-100 sample tube
- (d) U-100 cut shoe

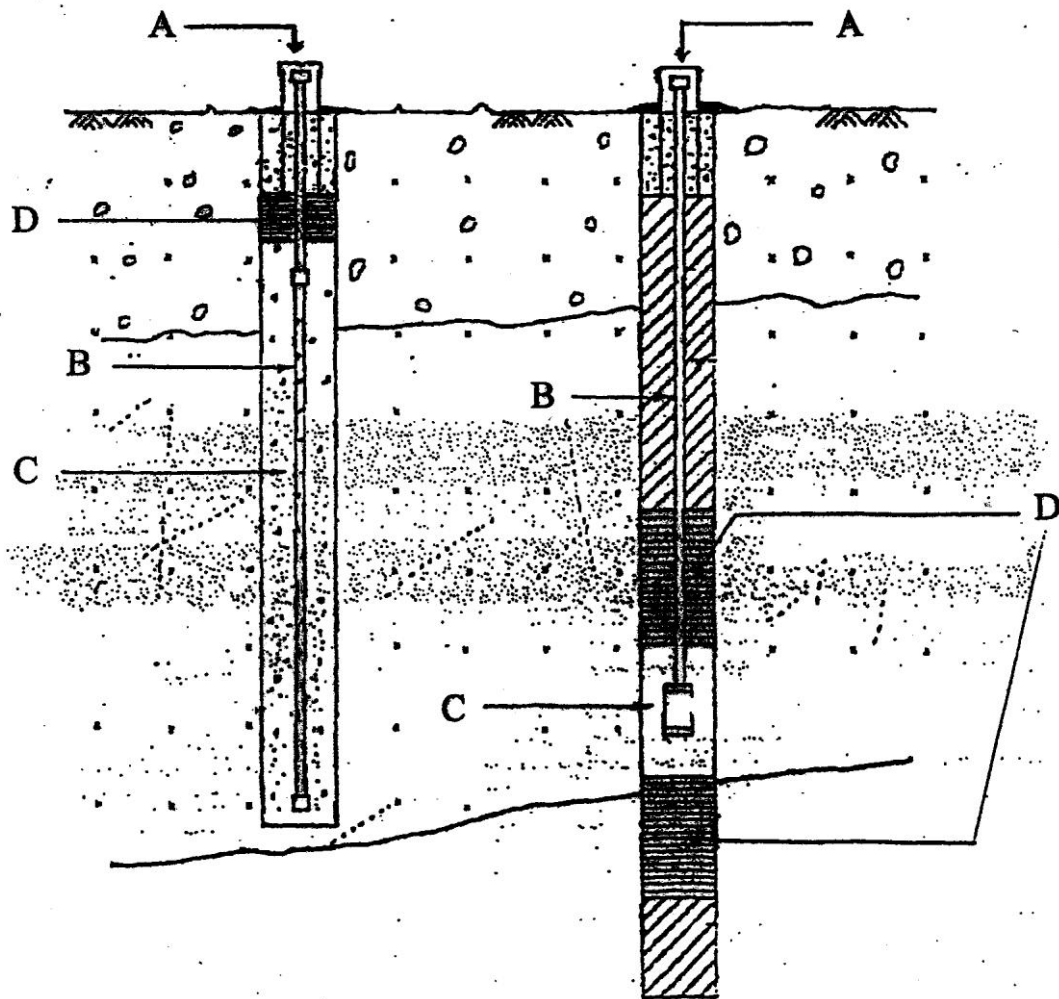


11. While carrying out soil sampling with 'Piston Sampler' in soft mud, the location where the trapped air and water inside the sample tube flowing out is :
- (a) from the rubber piston
  - (b) from the piston rod
  - (c) from the open end of piston tube
  - (d) from the vent hole of sampler head
12. When a ground investigation operator working with a drilling machine with MANUAL CHUCK. Before the start of drilling, he must ensure which of the following procedure :
- (a) the sampling pattern
  - (b) the condition of drill rods
  - (c) drill rod tightly secured by manual chuck with hex key still in-place
  - (d) drill rod tightly secured by manual chuck with hex key removed
13. The standard free fall distance of automatic trip hammer is :
- (a) 400mm ( approx.16" )
  - (b) 500mm ( approx.20" )
  - (c) 760mm ( approx.30" )
  - (d) 1000mm ( approx.40" )

14. The TWO size of 'double tube swivel type core barrel' which are widely used by the drilling industry is :
- (1) TNW
  - (2) T2-101
  - (3) T6-131
  - (4) PWF
- (a) 1 & 2
- (b) 3 & 4
- (c) 1 & 3
- (d) 2 & 4
15. The cause of damage to 'Impregnated diamond bit' by overheat is :
- (a) hydraulic feed pressure too high
  - (b) flushing water pressure too high
  - (c) r.p.m. too high
  - (d) flushing water pressure and volume far less than required
16. The most suitable method to retrieve the soil sample from 'MAZIER 101' retractable triple tube swivel type core barrel is to :
- (a) use a sledge hammer to hammer the outer tube
  - (b) dis-assemble the outer and inner tube
  - (c) use blow out valve and pressurised water
  - (d) retrieve the plastic liner with a pair of pliers
17. The most appropriate length of casing when a "MAZIER 101" undisturbed sample is required at depth between 4m - 5m is :
- (a) 3.5m ( 11'-5" )
  - (b) 4.00m ( 13'-1.5" )
  - (c) 3.00m ( 9'-10" )
  - (d) 5.00m ( 16'-5" )

18. If the requirement of drilling a borehole is to determine the bedrock level, the immediate procedure when the flush casing encounters hard stratum is to :
- (a) stop operation immediately
  - (b) continue drilling until no further penetration can be made
  - (c) ream the casing down into rock level until indicated water pressure is slightly higher than normal working pressure, and then insert core barrel
  - (d) extract casing
19. While drilling in fractured and abrasive rock formation, the core lifter and case were jammed, the correct procedure is to :
- (a) increase hydraulic feed pressure
  - (b) increase flushing water pressure
  - (c) increase r.p.m.
  - (d) extract the core barrel, adjust the core lifter and case or replace with new set of core lifter and case in case of damage
20. The name 'A' in the following drawing denotes :
- (a) casted iron cover
  - (b) sand layer
  - (c) P.V.C.tube
  - (d) cement/bentonite grout layer





21. The validity period of both Form 6 & 7 certificates for lifting appliances is :
- (a) 1 month
  - (b) 3 months
  - (c) 6 months
  - (d) 12 months

22. The minimum regulated height of safety barrier of working platform is :
- (a) 1 meter ( 3'-3" )
  - (b) 1.50 meters ( 4'-11" )
  - (c) 2 meters ( 6'-6" )
  - (d) 1.75 meters ( 5'-9" )
23. The correct procedure for manual heavy lifting is to :
- (a) increase the weight and quantities per cycle in order to finish the work on time
  - (b) adopt the correct procedure and precaution as mentioned by Occupation and Health Authority
  - (c) disregard the height of shelves, place the goods as ordered
  - (d) transport the goods through alley without sufficient light
24. From safety point of view, when construction workers have had lunch, they should not :
- (a) eat sufficient portion of food
  - (b) have a nap
  - (c) consume any amount of alcohol
  - (d) play electronic game
25. The reason why cotton gloves are prohibited when workers are working with rotation parts or objects is :
- (a) cotton glove is not oil resistance
  - (b) cotton glove is not cost effective
  - (c) the fibre of cotton glove will easily stuck with the rotation parts or object and cause severe injuries
  - (d) cotton glove can cause skin allergy