**CORPS OF ENGINEER**
**Rank: Corporal**

## II. MILITARY OCCUPATIONAL SPECIALTY

1. It is a defensive pattern conducted to deny the enemy access to designated terrain or facility for a specified time.

   a. Defense in sector
   b. Defense from battle position
   c. Area defense
   d. Mobile defense

2. It is a step in Troop Leading Procedures wherein the commander gives preliminary notice to his troops to prepare for an incoming operation.

   a. Warning Order
   b. Make reconnaissance
   c. Supervise
   d. Issue Orders

3. It is a method or scheme for a military action and/or a proposal to carry out a command decision or project.

   a. Decision
   b. Estimate
   c. Plan
   d. Order

4. These are written or oral communications that convey information governing action.

   a. Order
   b. Decision
   c. Plan
   d. Routine

5. These are tools used to determine a surface that is truly horizontal and vertical.

   a. Level hose
   b. Carpenters level
   c. Line level
   d. Plumb bob

6. A level in logistics that involves coordination with intra-AOR logistics to operating forces.

   a. Operational
   b. Below
   c. Strategic
   d. Tactical

7. It describes an area or ground defined by specific limits over which movement is anticipated.

   a. Tactical
   b. Special
   c. Axis Route
   d. Technical

8. These are tools used for gripping, forming or holding work and sometimes for cutting.

a. Pliers
b. Planes
c. Chisels
d. Wrenches

9. It provides a disruptive effect through the use of pixelated patterns at a range of scales.

a. Concealment
b. Camouflage
c. Digital Camouflage
d. Cover

10. This lane permits usage in only one direction at any one time.

a. Double
b. Single
c. Multiple
d. Express

11. It is a hardened steel tool with one or more surface covered by V-shape rows or sharp ridge or tooth that has many types, shapes and sizes.

a. Chisel
b. Saw
c. Planes
d. Files

12. It is the usage of profile in surveying.

a. Compute volume of earthwork
b. Draw elevation
c. Measure depression
d. Measure elevations

13. These workers commonly use a 50-meter steel tape.

a. Carpenters
b. Surveyors
c. Mechanics
d. Masons

14. It is one of the most useful and convenient tool for laying out small work.

a. Combination
b. Carpenters steel
c. Sliding T-Square
d. Try square

15. These are tools that are designed for a wide variety of uses such as construction, entrenching, timber cutting, bridging and tree clearing.

a. Chain saw
b. Cross cut saw
c. Portable power tools
d. Hand tools

16. It is a sewage that turns dark and smell unpleasantly due to anaerobic decomposition.

a. Septic
b. Scum
c. Sewer
d. Digestion

17. It consists of steel blades with or without handles that are ground and sharpened to produce a keen cutting edge.

a. Chisel
b. Files
c. Planes
d. Saw

18. These are tools used to obtain a true vertical, for checking uprightness of walls that are truly vertical.

a. Plumb bob
b. Level hose
c. Line level
d. Carpenters level

19. These are connections between two pieces of timber that are joined together with an angle.

a. Joints
b. Fishplates
c. Scab
d. Splice

20. A truss bridge where the truss is below the roadway.

a. Deck Truss
b. Deck Arc
c. Through Arc
d. Through Truss

21. It is placed over the stringers in order to transmit the loads evenly onto the stringers. It can be made of concrete or timber.

a. Deck
b. Bearing Plates
c. Stringer
d. Tread way

22. A type of reconnaissance which is conducted to determine the immediate military traffic ability of a specific route characterized by inadequate time.

a. Deliberate Route
b. Hasty route
c. Planned
d. Pre-planned

23. It begins just outside the building foundation wall and ends at the main sewer line or pipe in the street or at a septic tank.

a. House Drain
b. Storm Sewer & Drain
c. Septic Tank
d. House Sewer

24. These are controlled areas that decrease congestion at the river.

a. Assembly
b. Waiting
c. Staging
d. Crossing

25. A part of mine that sets-off the detonator or igniter charge.

a. Firing mechanism
b. Booster
c. Main Charge
d. Over charge

26. It is a saw designed to cut almost any size or shape of metal objects.

a. Nested
b. Keyhole
c. Hack
d. Two-man

27. Any obstruction that stops, delays, or restricts movements or maneuver.

a. Existing
b. Supplemental
c. Reinforcing
d. Natural and artificial

28. It consists of two traps, one designed to be detected, and the other to be actuated, when the first is being dealt with.

a. Anti-Tank ditch
b. Wire and Log
c. Protective
d. Minefields

29. It is used in the development of field fortifications, trenching operations, emplacement of culverts, drainage ditch construction and maintenance, quarry support operations, and loading vehicles from natural stockpiles.

a. Bulldozer
b. Scoop Loader
c. Road Grader
d. Excavator

30. It reduces the effectiveness of enemy weapons systems by developing protective positions in favorable locations.

a. Combat Engineer Vehicle
b. Counter-mobility
c. Mobility
d. Survivability

31. It reinforces terrain with obstacles to hinder enemy operations and maximize the effectiveness of direct and in direct fires.

a. Crossing Gap
b. Counter-mobility
c. Mobility
d. Survivability

32. It is the numerical process of taking away a quantity or several quantities from a whole or simply finding the difference between two numbers.

a. Addition
b. Subtraction
c. Multiplication
d. Division

33. A parcel of the road structure that serves as the foundation.

a. Base Course
b. Crown
c. Surface Coarse
d. Subgrade

34. It is the liquid conveyed by a sewer.

a. Purified Water
b. Sewage
c. Sewerage
d. Septic

35. It is a solid figure whose base is a circle and whose sides tapper evenly up to an apex.

a. Square
b. Rectangle
c. Cone
d. Triangle

36. Any action taken to keep materiel in a serviceable condition or to restore unserviceable materiel to its serviceability.

a. Overhaul
b. Maintenance
c. Rebuild
d. Repair

37. It is a nonstandard device usually fabricated from common mat'ls, incorporating explosive, pyrotechnic, or lethal chemicals intended to injure, kill/or destroy property.

a. Bomb
b. IED
c. explosive
d. grenade

38. What will you do when your group/engineer combat unit encountered an IED?

a. Expect follow an attacks
b. Pick-up the IED
c. Move personnel, civilian & military, 300m from IED
d. Call the combat engineer

39. What will you do when you will enter in an IED prone environment?

a. Turn-on your gadget
b. Move closer to each other
c. Turn-off all electrical/electronic devices
d. Move away from IED

40. What will you first do when you found a suspected IED?

a. Pick-up the IED
b. Call your officer
c. Confirm the object
d. Shout for IED

41. This raft, although more water proof than the poncho brush raft, will only float about 35 kilograms of equipment.

a. Poncho Donut Raft
b. Australian Poncho Raft
c. log Raft

42 The other equipment use in two rope bridge are two rope and two snap link.

a. True
b. False

43. When launching any of the above rafts, take care not to puncture or tear it by dragging it on the ground.

a. True
b. False

44. Increase the combat effectiveness of the maneuver force by accomplishing mobility, counter mobility and survivability task.

a. combat engineer c. combat arms
b. b. combat maneuver

45. To increase the combat effectiveness of the maneuver force by accomplishing mobility, counter mobility and survivability.

a. vision b. function c. mission

46. If properly constructed, will support about 115 kilograms.

a. Brush Raft b. Poncho Raft c. Australian Raft

47. It takes more time to construct than the brush raft or Australian poncho raft, but it is effective.

a. Poncho Donut Raft c. log Raft
b. Australian Poncho Raft

48. One of the Floatation Device used is Empty gallons

a. True b. False

49. Quicksand is a mixture of sand and water that forms a shifting mass.

a. True b. False

50. You can make a raft using any dry, dead, standing trees for logs.

a. Poncho Raft c. Brush Raft
b. Log Raft

51. The First Commander of the AFP Corps of Engineers.

a. Gen Edilberto Adan c. Gen Edilberto Ramos
b. Gen Edilberto Evangelista d. Gen Edilberto Atienza

52. The Corps of Engineers was formally activated on_____.

a. February 10, 1938 c. February 10, 1937
b. October 31, 1896

53. The 355th Air Engineering Wing is the engineer unit of the Philippine Air Force.
a. True b. False

54. The major engineer unit of the Philippine Air force.
    a. Naval Construction Brigade
    b. 525th Engineer Combat Battallion
    c. 355th Air Engineer Wing

55. It is used to measure and mark lumber, to test the squareness and flatness of wood.
    a. Carpenter's steel square
    b. Steel Measuring Tape
    c. Try square

56. What will you/engr combat unit do to prevent personnel from entering the suspected IED?
    a. Confirm the IED
    b. Clear the area
    c. Call your superior
    d. Cordon the area

57. To perform maneuver force mission when required or necessary.

    a. true
    b. false

58. To provide general engineer support to maneuver forces units and assist in the socio- economic development program of the government.

    a. Infantry Bn
    b. Engineer Cons'tBn
    c. Engineer CbtBn

59. To perform vertical and horizontal projects for the AFP units.

    a. Engr Combat Bn
    b. Inf Bn
    c. Engr Construction Bn

60. It is the smallest engineer unit which is capable of planning and sustaining operations.

    a. battalion
    b. company
    c. brigade

61. It is used for measuring circumference and long distances, where rules cannot be applied.

    a. Try square
    b. Carpenter's steel square
    c. Steel measuring tape

62. It consists of two jointed metal legs hinged together at the top.

    a. Dividers
    b. Line level
    c. Carpenter's level

63. It is used to determine whether a surface is truly horizontal or vertical.

a. Line level
b. Carpenter's Level
c. Plumb bob

64. It is a short level with a hook at each end for hanging it onto a cord usually 3 inches.

a. Line level
b. Plumb bob
c. Both a and b

65. An Engineers Recon Team's primary mission is collecting Tactical and Technical Information.

a. True
b. False

66. Engineer recon elements may consist of an engineer platoon, squad, team, or other element.

a. True
b. False

67. Sharp curves radius less than or equal to 25 meters is considered as.

a. Maneuver
b. "OB
c. Terrain

68. It is a block attached to a stationary anchor.

a. Fixed Block
b. Floating Block
c. Running Block

69. It is that part of total resistance which is added to the recovery by friction in tackle.

a. water resistance
b. tackle resistance
c. mire resistance

70. Personnel should be given the benefit or protective clothing and equipment essential to the performance of an assigned task.

a. Housekeeping
b. Sanitary convenience
c. Personnel protection

**CORPS OF ENGINEER**
**Rank: Sergeant**

## II. MILITARY OCCUPATIONAL SPECIALTY

1. It is the entire width which lies within the limits of earthwork construction and is measured between the outside edges of cut or fill slopes.

   a. Roadbed
   b. Traveled way
   c. Sub-grade
   d. Roadway

2. It can be anything from a superhighway to a path through the jungle and/or any route that is used by the military for any type of transmission.

   a. Military Road
   b. Airfield
   c. Roadbed
   d. Traffic Lane

3. It is a truss bridge where the truss is below the roadway.

   a. Deck Arc
   b. Through Arc
   c. Deck Truss
   d. Through Truss

4. The initiating action that closes an electrical circuit which detonates electricity.

   a. Chemical
   b. Electrical
   c. Friction
   d. Mechanical

5. Any obstruction that stops, delays, or restricts movements or maneuver.

   a. Anti-tank ditch
   b. Existing obstacle
   c. Reinforcing obstacle
   d. Natural and artificial obstacle

6. A reinforced terrain with obstacles to hinder enemy operations and maximize the effectiveness of direct and indirect fires.

   a. Mobility
   b. Crossing Gap
   c. Counter-mobility
   d. Survivability

7. It is a straight line from the center to any point of a circle.

   a. Radius
   b. Chord.
   c. Diameter
   d. Arc

8. A type of offensive operations with the purpose to gain or regain enemy contact.

   a. Movement to contact
   b. Exploitation
   c. Envelopment
   d. Penetration

9. The characteristic of defensive operations that involves detailed planning, recon and security patrols, positioning forces in depth, improving terrain to favor the defender.

    a. Gain Time
    b. Preparation
    c. Retain tactical objective
    d. Security

10. It is a system of tiredness, lack of training or lack of personal discipline.

    a. Carelessness
    b. Equipment failures
    c. Ignorance
    d. Wrong calculation

11. It is an organized movement to the rear or away from the enemy.

    a. Delay
    b. Retrograde operation
    c. Retirement
    d. Withdrawal

12. It is an operation where a force not in contact moves away from the enemy in an organized manner.

    a. Delay
    b. Withdrawal
    c. Retrograde operation
    d. Retirement

13. This emphasizes that during offensive, dispersion and the wise use of terrain are the best ways to ensure success.

    a. Map Production
    b. Terrain Analysis
    c. Survivability Support
    d. Topographic Support

14. It is the assistance provided to operating troops primarily in the field of personnel, administrative services, civil affairs and logistics.

    a. Combat Arms
    b. Combat Kagitingan
    c. Mortal Combat
    d. Combat Service Support

15. Minefields, wire-obstacles, falling blocks, pre-chambered targets, smoke, confirmation and rubble are some of the examples of this type of obstacle.

    a. Reclining
    b. Reinventing
    c. Reincarnation
    d. Reinforcing

16. It is a battlefield function which includes all aspects of protecting personnel, weapons and supplies while simultaneously deceiving the enemy.

    a. Survivability
    b. Mobility
    c. Ability
    d. Velocity

17. It is used against fighting and protective position which includes mortar and artillery shells and rockets which caused blast and fragmentation.

    a. Delay
    c. Direct fire

b. Indirect fire
d. Steel

18. This function includes the cartographic production and reproduction of image or map-based graphics, and the production of topographic survey data.

a. Map distribution
b. Storage
c. Map production
d. Terrain analysis

19. It is a chord which passes through the center of the circle.

a. Arc
b. String
c. Radius
d. Diameter

20. It encompasses those engineer tasks which increase mobility, counter-mobility, and survivability of tactical and logistical units to the rear of the forward line of troops.

a. General
b. Civil
c. Highway
d. Topographic

21. It is the distance around a circle.

a. Diameter
b. Chord
c. Circumference
d. Radius

22. A type of river crossing operation which refers to movement on the rear across a water obstacle while in contact with the enemy.

a. Offensive
b. Hasty
c. Deliberate
d. Retrograde

23. Equipment that was best suited for trench excavation, load trucks, clean ditches, break up old concrete, install outlet pipes and numerous other jobs.

a. Bulldozer
b. Road Grader
c. Excavator
d. Scoop Loader

24. It is categorized as the most ideal explosives used in filling the borehole for quarry.

a. Dynamites
b. C4
c. Grenades
d. Plastic explosives

25. These are tools used primarily for driving and pulling nails and for driving items like wooden wedge brads and dowels.

a. Crow bar
b. Carpenters claw hammer
c. Napping hammer
d. Plastic face hammer

26. These areengineer equipment that serves as finishers for the construction project.

a. Road Grader
b. Bulldozer
c. Road Roller
d. Scoop Loader

27. It is used to measure and mark lumber and to test the square-ness and flatness of wood, this square sometimes called Framing square.

a. Carpenters steel square
b. Combination square
c. Steel measuring tape
d. T-square

28. An operation with the purpose of defeating the attacking enemy forces, securing the key decisive terrain, gaining information and disrupting enemy attacks.

a. Defense
b. Offense
c. Raid
d. Retrograde

29. It is a slope that can be the same as that of the traveled way but generally should be a little greater as it is more pervious than the surface course.

a. Cut
b. Shoulder
c. Fill
d. Ditch

30. It is the most ideal explosives used in filling the borehole for quarry.

a. Dynamites
b. C4
c. Grenades
d. Plastic explosives

31. It is best used for cutting steel structures.

a. C4
b. Dynamite
c. Tetrytol
d. Trinitrotoluene (TNT)

32. An encased explosive or other materials designed to destroy or damage vehicles, boats, or aircraft or to wound, kill or incapacitate personnel.

a. Mine
b. Explosive
c. Bomb
d. Mine warfare

33. It is a four sided figure with four right angles, the longer side is called the length and the shorter side is called the width.

a. Rectangle
b. Cone
c. Square
d. Triangle

34. These are obstacles which are limited only by imagination, time, manpower, or logistic constraints.

a. Cultural
b. Reinforcing
c. Natural
d. Supplemental

35. Personnel should be given the benefit or protective clothing and equipment essential to the performance of an assigned task.

    a. Housekeeping
    b. Sanitary convenience
    c. Personnel protection

36. All personnel should be instructed report promptly all personnel injuries and property damage, however slight.

    a. Reporting injuries
    b. Accident reporting
    c. Sanitary convenience

37. What is the minimum size of protection in a lighting outlet?

    a. 15 A
    b. 20 A
    c . 30 A
    d. 60 A

38. All specific rules for tool and all general safe, tool practices should be observed.

    a. Tool storage
    b. Tool inspection
    c. Tool safety

39. Students cannot move machines without the supervision of an instructor.

    a. True
    b. False

40. What is the minimum size of conductor in a convenience outlet?

    a. 2.0 $mm^2$
    b. 3.5 $mm^2$
    c. 5.5 $mm^2$
    d. 8.0 $mm^2$

41. Portion of a road surface upon which all vehicles move or travel.

    a. Roadway
    b. Shoulders
    c. Road Width
    d. Road Bed

42. It is used as prime movers for pushing or pulling loads, as power units for winches and hoists, and as moving mounts for dozer blades.

    a. Loader
    b. Bull dozer
    c. Road Roller

43. The main equipment of the road construction where its function is to scrape earth to an even or smooth surface.

    a. Bull dozer
    b. Road grader
    c. Road Roller

44. Tractors equipped with a blade and perhaps the most basic and versatile items of equipment in the construction industry.

    a. Bull dozer
    b. Motor grader
    c. Loader

45. It is used primarily to excavate below the natural surface of the ground on which the machine rests.

    a. Loader
    b. Back hoe
    c. Road Grader

46. What is the minimum size of conductor in a lighting outlet?

    a. 2.0 $mm^2$
    b. 3.5 $mm^2$
    c. 5.5 $mm^2$
    d. 8.0 $mm^2$

47. Any obstruction designed or employed to disrupt, fix, turn or block the movement of an opposing force.

    a. Counter Obstacle
    b. Counter mine
    c. obstacle

48. Is the inclined surface of a hill, mountain, ridge, or any other part of the earth's land surface.

    a. Slope
    b. Climate
    c. Soil

49. Those obstacle that are already present on the battlefield and not placed there through military effort.

    a. Reinforcing
    b. Breaching
    c. Existing

50. Those activities that enable a force to move personnel and equipment on the battlefield without delays to terrain or obstacles.

    a. Mobility
    b. General Engineering
    c. Survivability
    b. Counter mobility

51. It is a road that can be anything from super highway to a path in the jungle.

    a. Urban Road
    b. City Road
    c. Military Road

52. Is the slope from the top of a cut to the ditch line or bottom of ditch is often referred to as the back slope.

    a. Base
    b. Ditch
    c. Shoulder
    d. Cut slope

53. It consists of natural or artificial mixture of sand and clay that is graded and drained to form a road surface.

a. Earth
b. Treated Surface
c. Gravel
d. Sand Clay

54. Earthen Roads may be treated with bituminous materials to control of dust and waterproof the surface.

a. Earth
b. b . Sand Clay
c. Gravel
d. Treated Surface

55. Loaders are classified according to _____.

a. Weight
b. Horse Power
c. Bucket size

56. It is an equipment suitable for use of in hauling many types of materials.

a. Dump truck
b. Loader
c. Bull Dozer

57. The primary purpose of this equipment is for loading and lifting.

a. Grader
b. Loader
c. Backhoe

58. The primary purpose of this equipment is for pulling and pushing.

a. Dozer
b. Compactor
c. Dump truck

59. What equipment is suitable to haul materials for long distances.

a. Loader
b. Dump truck
c. Road Grader

60. It is a state of soil that has not been disturbed from its natural state.

a. Loose Soil
b. Bank Soil
c. Compacted Soil

61. Obstacles are limited only by imagination, time, manpower, or logistic constraints.

a. Reinforcing
b. Breaching
c. Existing

62. Those engineers' task which increases the mobility, survivability and sustainability of tactical and logistical units toward the rear of the forward line of troops (FLOT).

a. Topographic Engineering
b. Survivability
c. General Engineering
d. Counter mobility

63. The construction of obstacles and emplacement of minefields to delay, disrupt, and destroy the enemy by reinforcement of the terrain.

a. Topographic Engineering
b. General Engineering
c. Survivability
b. Counter mobility

64. It is an activity undertaken to provide concealment and protection from effects of enemy weapon.

a. Topographic Engineering
b. General Engineering
c. Survivability
b. Counter mobility

65. The operation provides the commander with an effective means to evaluate the battlefield in terms of mobility, counter mobility and survivability; gain knowledge of the battlefield; visualize the terrain and apply all available topographic information on each unit's area of operations and interest.

a. Topographic Engineering
b. General Engineering
c. Survivability
b. Counter mobility

66. It is the destruction by fire, water, explosive, mechanical or other area structure, facilities or materials to accomplish a military objective.

a. Explosion
b. IED
c. Bombing
d. Military demolition

67. Example of initiation system is _____?

a. Time Blasting Fuse
b. Blasting Cap
c.TNT
d. Fuse Igniter

68. Example of firing system is _____?

a. Time Blasting Fuse
b. Blasting Cap
c. TNT
d. Fuse Igniter

69. It is a system that ignites the firing system to create a pressure wave.

a. Initiation system
b. Priming Charge
c.Firing System
d. Main Charge

70. What is the total amount of explosives for an external timber cutting of one tree with D=24 inches?

a. 5 packs of C4
b. 6 packs of C4
c. 7 packs of C4
d. 9 packs of C4

**CORPS OF ENGINEERS**
**Rank: Staff Sergeant**

**1.** These are the purposes of a combat engineer.

a. Mobility, counter-attack, survivability and general merchandise
b. Mobility, counterpart, survivability and general engineering
c. Mobility, counter-mobility, survivability and general engineering
d. Mobility, counter-terrorism, survivability and general engineering

**2.** It enables the commander to maneuver tactical units into positions of advantage over the enemy.

a. Mobility
b. Counter-mobility
c. Breaching
d. Survivability

**3.** It is used to obtain a true vertical in checking the uprightness of walls.

a. Carpenters level
b. Level hose
c. Plumb bob
d. Line level

**4.** These consist of personnel alertness and operations to provide early discovery of enemy activities and protection.

a. Flank
b. Active
c. Passive
d. Guard

**5.** It is a step in Troop Leading Procedure wherein the commander gives preliminary notice to his troops to prepare for an incoming operation.

a. Issue Warning Order
b. Make reconnaissance
c. Supervise
d. Issue Orders

**6.** It is a logical sequence of action being followed by a commander in executing a tactical operation.

a. Engineer estimate
b. Troop Leading Procedure
c. Supervise
d. Estimate of the situation

**7.** It is the assistance provided to operating troops primarily in the field of personnel, administrative service, and logistics.

a. Combat Arms
b. Combat Service Support
c. Combat Boots
d. Combat Support

**8.** It is a logistical level that involves coordination with intra-AOR logistics to operating forces.

a. Below
b. Strategic
c. Operational
d. Tactical

**9.** One of the areas of logistics that includescommissaries, health services, mortuary and graves registration.

a. Maintenance
b. Transportation
c. Supplies
d. Other Services

**10.** It is the process of planning and executing the sustainment of forces in support of Army operations.

a. Army Logistics
b. Army Operations
c. K-9 Operation
d. Signal Operations

**11.** The number of board feet in a lumber with a dimension of two inches by four feet by twelve feet.

a. 18
b. 10
c. 15
d. 8

**12.** It is the equivalent of one meter by one meter by another one meter.

a. 1 cubic foot
b. 1 cubic meter
c. 1 linear meter
d. 1 square meter

**13.** It is a level of Logistics that focuses on planning and support within operating units.

a. Operational
b. National
c. Strategic
d. Tactical

**14.** One of the characteristics of Logistics characterized by the ability to meet the changing logistical requirements on short notice.

a. Anticipation
b. Continuity.
c. Responsiveness
d. Integration

**15.** It is the usage of profile in surveying.

a. Measure elevations
b. Draw elevation
c. Measure depression
d. Compute volume of earthwork

**16.** These are workers who use a 50-meter steel tape.

a. Surveyors
b. Masons
c. Mechanics
d. Carpenters

**17.** It is one of the most useful and convenient tool for laying out small work.

a. Combination
b. Carpenters steel
c. Sliding T-Square
d. Try square

**18.** These are tools that are designed for a wide variety of uses such as construction, entrenching, timber cutting, bridging and tree clearing.

a. Blade
b. Chain saw
c. Hand tools
d. Portable power tools

**19.** Are those which are durable in nature and when in use, do not suffer any material or substantial change or alteration in their sizes or forms.

a. Non–Expendable
b. Extended
c. Expendable
d. Semi-Expandable

**20.** Those supplies that are acquired or bought through appropriated or reimbursable funds of the AFP.

a. Non-republic
b. Republic
c. Federal
d. Semi-republic

**21.** It is a bridge where the truss is below the roadway.

a. Deck Arc
b. Through Arc
c. Deck Truss
d. Through Truss

**22.** These are controlled areas which decreases congestion at the river.

a. Assembly
b. Staging
c. Crossing
d. Waiting

**23.** It is a part of mine that sets-off the detonator or igniter charge.

a. Booster
b. Firing mechanism
c. Main Charge
d. Trigger

**24.** It is the initiating action that closes an electrical circuit which detonates electricity.

a. Chemical
b. Friction
c. Electrical
d. Mechanical

**25.** Any obstruction that stops, delays, or restricts movements or maneuver.

a. Natural and artificial
b. Existing
c. Reinforcing
d. Supplemental

**26.** It consists of two traps, one designed to be detected, and the other to be actuated, when the first is being dealt with.

a. Mine fields
b. Anti-Tank ditch
c. Protective Obstacle
d. Wire and Log Obstacle

**27.** These were constructed by personnel of all arms and services in field conditions.

a. Field fortification
b. Employment of weapons
c. Deliberate emplacements
d. Protection

**28.** These processes are more complex and require planning in constructing field emplacements.

a. Deliberate emplacement
b. Camouflage method
c. Artillery emplacement
d. Logistics surface shelters

**29.** It is the science that describes the composition, structure and origin of the earth's crust, its surface shell.

a. Geology
b. Earth
c. Sand
d. Water

**30.** It refers to the entire unconsolidated material that overlies and is distinguishable from bedrock.

a. Soil
b. Sand
c. Gravel
d. Wood

**31.** It refers to the distribution of particles of different sizes in soil.

a. Gradation
b. Density
c. Soil
d. Structure

**32.** It is an obstacle that refers to construction or mine operation, and employment of demolition that degrades enemy freedom of movement anywhere in the battlefield.

a. Counter-mobility
b. Mobility
c. Survivability
d. Topography

**33.** It is used against fighting and protective position which includes mortar and artillery shells and rockets which caused blast and fragmentation.

a. In-direct fire
b. Direct fire
c. Delay
d. Steel

**34.** It includes the cartographic production and reproduction of image or map-based graphics, and the production of topographic survey data.

a. Map production
b. Map distribution and storage
c. Terrain analysis
d. Topographic map

**35.** is a mineral or an aggregate of mineral.

a. Granite
b. Rock
c. Limestone
d. Diamond

**36.** It is a solidified products of molten material from within the earth's mantle.

a. Sedimentary rocks
b. Igneous rocks
c. Metamorphic rocks
d. Tectonic

**37.** It is a formed by the deposition of particles of older rocks that have been broken down and transported from their original positions by the agents of wind, water, ice or gravity.

a. Sedimentary rocks
b. Igneous rocks
c. Metamorphic rocks
d. Tectonic

**38.** It is an igneous or sedimentary rocks that have been subjected to extreme heat and/or pressure have been altered in appearance and physical properties.

a. Sedimentary rocks
b. Igneous rocks
c. Metamorphic rocks
d. Fossil Rock

**39.** It is a rock strata react to vertical and horizontal forces by bending and crumpling, or folding.

a. Folds
b. Faults
c. Joints
d. Plates

**40.** A fractured surface along which there has been relative displacement of rock in any direction to the fractured plane.

a. Folds
b. Faults
c. Joints
d. Plates

**41.** It deals with the study of rocks.

a. Petrology
b. Paleontology
c. Mineralogy
d. Geomorphology

**42.** It deals with the description/identification of mineral.

a. Stratigraph
b. Historical Geology
c. Geomorphology
d. Mineralogy

**43.** It deals with form, origin and internal structure of rocks and masses.

a. Petrography
b. b. Sedimentation
c. Structural Geology
d. Petrology

**44.** It deals with the study of fossil record

a. Historical Geology
b. Sedimentation
c. Petrography
d. Paleontology

**45.** Used to squeeze the shell of a non-electric blasting cap around a time blasting fuse.

a. Crimper
b. Plier
c. Cutter
d. Longnose

**46.** Example of main charge is _____?

a. Time Blasting Fuse
b. Blasting Cap
c. TNT
d. Fuse Igniter

**47.** It provides electric impulse needed to initiate electric blasting cap operations.

a. Battery
b. Blasting Machine
c. M57 Test Set
d. TNT

**48.** What is the minimum safety distance of basic demolition?

a. 200m
b. 100m
c. 300m
d. 400m

**49.** Used primarily for cutting steel and breaching.

a. C4
b. TNT
c. Det Cord
d. Dynamite

**50.** It is a form from materials carried into the sea by streams and by material eroded from the beaches by wave and tidal action.

a. Alluvial
b. Lacustrine
c. Marine
d. Lacustrine

**51.** It refers to the entire unconsolidated material that overlies and is distinguishable from bedrock.

a. Sand
b. Gravel
c. Soil
d. Rock

**52.** It is the process by which rock is converted into soil.

a. Weathering
b. Transported
c. Residual
d. Alluvial

**53.** It is an action when the enclosed water freezes, it expands nearly one tenth of its volume, creating pressures up to 4000 lbs per square inch (PSI).

a. Frost Action
b. Temperature Changes
c. Crystal Growth
d. Decomposition

**54.** It is a type of soil that has a good representation of all particle sizes from largest to smallest.

a. Well graded
b. Uniformly graded
c. Poorly graded
d. Ungraded

**55.** It is a particle in which all projections have removed and few irregularities in shape remains.

a. Subrounded
b. Rounded
c. Sub-angular
d. Angular

**56.** It is the ability of the mineral to split, or separate along prepared plane when broken.

a. Specific Gravity
b. Cleavage
c. Hardness
d. Fracture

**57.** It is a mineral that breaks irregularly, not along the cleavage plane.

a. Specific Gravity
b. Cleavage
c. Hardness
d. Fracture

**58.** It is a manner in which the surface reflects lights, metallic and non-metallic.

a. Fracture
b. Luster and Color
c. Streak
d. Specific Gravity

**59.** It is the color of the powdered or crushed mineral.

a. Fracture
b. Color
c. Streak
d. Specific Gravity

**60.** It is the ratio of its weight to weight of an equal volume of water.

a. Fracture
b. Luster and Color
c. Streak
d. Specific Gravity

**61.** It is a particle which is relatively large and nearly equal in all three dimensions.

a. Bulky grains
b. Platy grains
c. Needlelike
d. Boulders

**62.** It is a form when a stream loses its carrying capacity with decreasing velocity.

a. Eolian
b. Alluvial
c. Needlelike
d. Marine

**63.** It is the ability of a soil to deform without breaking.

a. Plasticity
b. Cohesion
c. Absorbed water
d. Eoilan

**64.** It is a carbon dioxide dissolve in water that forms a weak acid called carbonic acid.

a. Carbonation
b. Solution
c. Oxidation
d. Decomposition

**65.** It is a particle comparable in size to a lemon, an egg or a walnut.

a. Coarse gravel
b. Sand
c. Silt/Clay
d. Angular

**66.** It is a chemical union of a compound with oxygen.

a. Carbonation
b. Solution
c. Oxidation
d. Hydration

**67.** It is related to hydration that involves water.

a. Carbonation
b. Solution
c. Hydrolysis
d. Hydration

**68.** It is a growth of minerals precipitating from groundwater similar to that of expanding ice.

a. Crystal Growth
b. Organism Growth
c. Frost Action
d. Angular

**69.** It is a visible lines used mainly to define the shape and size of structure object.

a. Hidden lines
b. Section lines
c. Object lines
d. Blue Line

**70.** What is the minimum size of protection in an ACU outlet?

a. 15 A
b. 20 A
c. 30 A
d. 60 A

**CORPS OF ENGINEERS**
**Rank: Technical Sergeant**

1. It enables the commander to maneuver tactical units into positions of advantage over the enemy.

   a. Mobility
   b. Counter-mobility
   c. Breaching
   d. Survivability

2. It involves detailed planning, recon and security patrols, positioning forces in depth, improving terrain to favor the defender.

   a. Preparation
   b. Gain Time
   c. Retain tactical objective
   d. Security

3. These consist of personnel alertness and operations to provide early discovery of enemy activities and protection.

   a. Flank
   b. Active
   c. Passive
   d. Guard

4. The number of board feet in a lumber with a dimension of two inches by four feet by twelve feet.

   a. 8
   b. 10
   c. 15
   d. 18

5. It is one of the most useful and convenient tool for laying out small work.

   a. Carpenters steel
   b. Sliding T-Square
   c. Combination
   d. Try square

6. It is conducted during military operations with close coordination with surface elements.

   a. Close Air Support
   c. Fire Support

7. It is a form of energy generated by induction or chemical change, having magnetic, chemical and radiant effects.

   a. Electricity
   b. Earth Volume
   c. Energy
   d. Ground

8. It can be anything from a superhighway to a path through the jungle or any route that is used by the military for any type of transmission.

   a. Airfield
   b. Military Road
   c. Roadbed
   d. Traffic Lane

9. It refers to the entire unconsolidated material that overlies and is distinguishable from bedrock.

a. Gravel
b. Sand
c. Soil
d. Stone

10. It refers to the distribution of particles of different sizes in soil.

a. Density
b. Gradation
c. Structure
d. Top Soil

11. It is the entire width which lies within the limits of earthwork construction and is measured between the outside edges of cut or fill slopes.

a. Roadbed
b. Sub-grade
c. Roadway
d. Traveled way

12. It is placed over the stringers in order to transmit the loads evenly onto the stringers that can be made of concrete or timber.

a. Bearing Plates
b. Tread way
c. Stringer
d. Deck

13. It is the oldest type of bridge constructed and was originally designed for its natural strength.

a. Cable Stayed Bridge
b. Beam Bridge
c. Arc Bridge
d. Suspension bridge

14. This type of bridge is being stabilized by cables that span across its length.

a. Arc Bridge
b. Cable Stayed Bridge
c. Beam Bridge
d. Suspension bridge

15. It is an obstacle construction or mine operation, and employment of demolition which degrades enemy freedom of movement anywhere in the battlefield.

a. Mobility
b. Counter-mobility
c. Survivability
d. Topography

16. It consists of two traps, one designed to be detected, and the other to be actuated, when the first is being dealt with.

a. Mine fields
b. Anti-Tank ditch
c. Protective Obstacle
d. Wire and Log Obstacle

17. It is the science that describes the composition, structure and origin of the earth's crust, its surface shell.

a. Earth
b. Geology
c. Sand
d. Water

18. It is used against fighting and protective position which includes mortar and artillery shells and rockets which caused blast and fragmentation.

a. Delay
b. Direct fire
c. Steel
d. In-direct fire

19. This function includes the cartographic production and reproduction of image or map-based graphics, and the production of topographic survey data.

a. Map distribution and storage
b. Terrain analysis
c. Map production
d. Topographic Map

20. The following are examples of reinforcing obstacle EXCEPT-

a. Falling blocks
b. Minefields
c. Rubber band
d. Wire-obstacles

21. It is a type reconnaissance which considers the detailed aspects of the route such as road width, traffic density over a period of time and surface strength.

a. Hasty route
b. Deliberate Route
c. Stealth route
d. Scout route

22. This river crossing operation is a movement to the rear across a water obstacle while in contact with the enemy.

a. Deliberate
b. Retrograde
c. Hasty
d. Offensive

23. The lifelines that connect the various support areas of trains to one another.

a. Main supply route
b. Landing zone
c. Highway
d. Traffic light

24. It is the most ideal explosives used in filling the borehole for quarry.

a. Dynamites
b. C4
c. Grenades
d. Plastic explosives

25. A type of explosive best used for cutting steel structures.

a. C4
b. Dynamite
c. Trinitrotoluene (TNT)
d. Tetrytol

26. It is a straight line from the center to any point of a circle.

a. Radius
b. Chord.
c. Diameter
d. Arc

27. Any man-made object constructed to hinder movement.

a. Plastic
b. Natural
c. Artificial
d. Steel

28. It is a system of tiredness, lack of training or lack of personal discipline.

a. Wrong calculation
b. Equipment failures
c. Ignorance
d. Carelessness

29. This concept reduces the effectiveness of enemy weapons systems by developing protective positions in favorable locations.

a. Combat Engineer Vehicle
b. Counter-mobility
c. Mobility
d. Survivability

30. It reinforces terrain with obstacles to hinder enemy operations and maximize the effectiveness of direct and indirect fires.

a. Counter-mobility
b. Mobility
c. Survivability
d. Crossing Gap

31. It is the entire width which lies within the limits of earthwork construction and is measured between the outside edges of cut or fill slopes.

a. Roadway
b. Sub-grade
c. Roadbed
d. Traveled way

32. It can be anything from a superhighway to a path through the jungle. Any route that is used by the military for any type of transmission.

a. Military Road
b. Roadbed
c. Traffic Lane
d. Airfield

33. An equipment that is used strictly for mechanical stabilization.

a. Bulldozer
b. Road Roller
c. Scoop Loader
d. Road Grader

34. The connections between two pieces of timber that come together with an angle.

a. Joints
b. Scab
c. Splice
d. Fishplates

35. It is the oldest type of bridge constructed which was originally designed for its natural strength.

a. Suspension Bridge
b. Beam Bridge
c. Arc Bridge
d. Cable Stayed Bridge

36. It is used for displaying and measuring length along X or Y axis.

a. Linear Dimensions
b. Dimensions lines
c. Section lines
d. Center Lines

37. What is the minimum size of conductor in a lighting outlet?

a. 2.0 $mm^2$
b. 3.5 $mm^2$
c. 5.5 $mm^2$
d. 8.0 $mm^2$

38. It is a type of paper-based reproduction usually of a technical drawing documenting an object.

a. Blueprint
b. Orthographic projection
c. One view
d. Notes

39. What will you do when your group/engineer combat unit encountered an IED?

a. Expect follow an attacks
b. Pick-up the IED
c. Move personnel, civilian & military, 300m from IED
d. Call the combat engineer

40. It is the destruction by fire, water, explosive, mechanical or other area structure, facilities or materials to accomplish a military objective.

a. Explosion
b. IED
c. Bombing
d. Military demolition

41. The construction of obstacles and emplacement of minefields to delay, disrupt, and destroy the enemy by reinforcement of the terrain.

a. Topographic Engineering
b. General Engineering
c. Survivability
b. Counter mobility

42. Obstacles are already presents on the battlefield and not placed there through military efforts.

a. Reinforcing
b. Breaching
c. Existing
d. Cultural

43. Includes not only natural, wild, but also cultivated forest and crops.

a. Swamps
b. Ditch / parapet
c. Tank ditches
d. Vegetation

44. Any obstruction designed or employed to disrupt, fix turn, or block the movement of an opposing force.

a. Countermine
b. log hurdles
c. Counter obstacle
d. Ditch

45. Those engineers' task which increases the mobility, survivability and sustainability of tactical and logistical units toward the rear of the forward line of troops (FLOT).

a. Topographic Engineering
b. Survivability
c. General Engineering
d. Counter mobility

46. Example of initiation system is _____?

a. Time Blasting Fuse
b. Blasting Cap
c.TNT
d. Fuse Igniter

47. It is a command relationship wherein a certain unit is in temporary placement of the company in an organization which the commander of the supported organization exercises the same degree of C2 as he does over his organic units.

a. General Support
b. Attached
c. OPCON
d. DS

48. It is inherent in C2 and used to monitor the company's status and to identify and correct deviations from set standards.

a. Command
b. Control
c. Supervision
d. Coordination

49. Example of firing system is _____?

a. Time Blasting Fuse
b. Blasting Cap
c. TNT
d. Fuse Igniter

50. It is a command relationship wherein an engineer company receives all of its tasking and missions from the supported TF

a. General Support
b. OPCON
c. Attached
d. DS

51. What will you do first, when you found a suspected IED?

a. Pick-up the IED
b. Call your officer
c. Confirm the object
d. Shout for IED

52. Enhance maneuver by placing place own troops in a more advantageous position or they ensure a steady and unhampered flow logistics to maintain the momentum of the attack.

a. mobility
b. mobility operation
c. counter mobility
d. mobility support

53. Engineer commanders and planners focus their mobility efforts in maintaining or sustaining the offense's momentum.

a. Mobility Support in the Defense
b. Mobility Support in the Offense
c. Mobility Operation
d. Mobility Support in Retrograde Operations

54. The goal of a defensive operation is to defeat the enemy's attack and transition to the offense.

a. Mobility Support in the Defense
b. Mobility Support in the Offense Operations
c. Mobility Operation
d. Mobility Support in Retrograde Operations

55. Natural and cultural features that are already present such as rivers, mountains, and cities.

a. Existing obstacles
b.Reinforcing obstacles
c. Obstacle intent
d. Obstacle intent

56. It is a measure undertaken to delay, impede enemy movement.

a. Mobility
b. Counter mobility
c. Survivability
d.Sustainment Eng'g

57. One of the engineer primary function which support all terrain data requirements.

a. Gen Eng'g
b. Topo Eng'g
c. Sustainment Eng'g
d. Survivability

58. Those activities that enable a force to move personnel and equipment on the battlefield without delays to terrain or obstacles.

a. Mobility
b. General Engineering
c. Survivability
d. Counter mobility

59. The operation provides the commander with an effective means to evaluate the battlefield in terms of mobility, counter mobility and survivability; gain knowledge of the battlefield; visualize the terrain and apply all available topographic information on each unit's area of operations and interest.

a. Topographic Engineering
b. General Engineering
c. Survivability
b. Counter mobility

60. It is a nonstandard device usually fabricated from common mat'ls, incorporating explosive, pyrotechnic, or lethal chemicals intended to injure, kill/or destroy property.

a. Bomb
b. IED
c. explosive
d. Demolition

61. It is a priming charge that requires 1.5amperes or 9 volts to initiate.

a. Battery
b. Electric Blasting Cap
c. Non-Electric Blasting Cap
d. C4

62. It is a system that ignites the firing system to create a pressure wave.

a.Initiation system
b. Priming Charge
c.Firing System
d.Main Charge

63. Used to squeeze the shell of a non-electric blasting cap around a time blasting fuse.

a. Crimper
b. Plier
c. Cutter
d. Longnose

64. Example of main charge is _____?

a. Time Blasting Fuse
b. Blasting Cap
c. TNT
d. Fuse Igniter

65. It provides electric impulse needed to initiate electric blasting cap operations.

a. Battery
b. Blasting Machine
c. M57 Test Set
d. TNT

66. What is the minimum safety distance of basic demolition?

a. 200m
b. 100m
c. 300m
d. 400m

67. Used primarily for cutting steel and breaching.

a. C4
b. TNT
c. Det Cord
d. Dynamite

68. Used primarily in quarrying operations, ditching, and stump removal.

a. TNT
b. Mil Dynamite
c. C4
d. Det Cord

69. It clears path through wire obstacles and heavy undergrowth. It will clear a 3 - 4-meter-wide path through wire obstacles.

a. Mil Dynamite
b. TNT
c. Bangalore
d. C4

70. Transmits a delayed spit of flame to a non-electric blasting cap.

a. Det Cord
b. Time Blasting Fuse
c. Lighter
d. Mil Dynamite