

LOWER LIMB MCQs

Lower Limb MCQs

Section # 01

1. Loss of patellar reflex and loss of cutaneous sensation on the anteromedial side of the leg indicate damage to this spinal nerve:

- A. L2
- B. L4
- C. L5
- D. S2
- E. S4

2. Which statement concerning the great saphenous vein is false?

- A. When it is removed and inserted as a coronary bypass, it is reversed, so that the cusps do not obstruct blood flow.
- B. It is located about ten cm. (a handbreadth) posterior to the medial border of the patella
- C. it passes anterior to the medial malleolus
- D. It perforates the femoral sheath
- E. It is accompanied by the sural nerve in the leg.

3. The deep fascia of the thigh:

- A. is thickened on its medial side to form the iliotibial tract
- B. has an oval opening which transmits the small saphenous vein
- C. is attached to the whole length of the inguinal ligament
- D. is designated the cribriform fascia
- E. lies superficial to the superficial inguinal lymph nodes

4. Structures passing through the adductor hiatus include:

- A. saphenous nerve
- B. profunda femoral artery
- C. both
- D. neither

5. Skin on the most dorsal part of the foot is supplied by the:

- A. Sural nerve
- B. first sacral nerve
- C. both
- D. neither

6. The muscle which can both flex the hip and extend the knee is:

- A. sartorius
- B. rectus femoris
- C. semimembranosus
- D. biceps femoris
- E. vastus lateralis

7. The actions of the gracilis muscle include _____ of the thigh at the hip and ____ of the leg at the knee.

- A. lateral rotation, lateral rotation of the thigh at the hip and
- B. medial rotation, extension
- C. abduction, flexion
- D. flexion, extension
- E adduction, flexion

8. Which muscle is able to produce flexion at the knee joint more efficiently if the hip joint is in flexion at the same time?

- A. semimembranosus
- B. rectus femoris
- C. hamstring part of adductor magnus
- D. sartorius
- E short head of biceps femoris

9. Difficulty extending the knee can result from damage to the ,

- A. femoral nerve
- B. inferior gluteal nerve
- C. common peroneal nerve
- D. superior gluteal nerve
- E tibial nerve

10. Muscles in the posterior thigh compartment are paralyzed because the sciatic nerve has been severed. Nevertheless the patient can still produce some flexion of the leg at the knee due to action of the:

- A. Sartorius m.
- B. semitendinosus m.
- C. both A and B
- D. short head of biceps femoris
- E gastrocnemius

11. The muscle that is not a medial rotator of the leg is the:

- A. semiembranosus
- B. semitendinosus
- C. biceps femoris
- D. gracilis
- E popliteus

12 After an obturator nerve injury, some adduction of the thigh is still possible because of double innervation to the:

- A. gracilis m.
- B. adductor magnus m.
- C. sartorius m.
- D. adductor longus n
- E adductor brevis m.

13. After passing through the obturator canal, divisions of the obturator nerve (an anterior branch and a posterior branch) pass on either side of the:

- A. pectineus m
- B adductor brevis m
- C. gracilis m.
- D. adductor magnus m.
- E adductor longus m.

14. Injury to the tibial nerve in the popliteal fossa might result in:

- A. loss of eversion
- B. (diminished sensation) on dorsal surface of foot
- C. inability to stand on one's toes
- D. drop foot
- E loss of sensation between the great and second toe

15. The fibular artery:

- A. supplies the muscles of the anterior compartment of the leg
- B. passes anterior to the interosseous membrane
- C. usually becomes the dorsalis pedis
- D. courses through the deep posterior compartment of the leg
- E none of the above

16. A tight plaster cast that exerted pressure on the head and neck of the fibula might result in loss of:

- A. eversion of the foot
- B. foot drop
- C. both
- D. neither

17. When the muscles of the anterior compartment of the leg swell from some kind of overuse:

- A. the deep fibular nerve may be injured
- B. there is loss of sensation in the web space between the great and second toes
- C. both
- D. neither

18. The medial and lateral plantar neurovascular structures enter the foot deep to the:

- A. inferior peroneal retinaculum
- B. abductor digiti minimi m.
- C. abductor hallucis m.
- D. quadratus plantae m.
- E sustentaculum tai

19. The medial plantar nerve innervates

- A. abductor hallucis m.
- B. abductor digiti minimi m.

- C. abductor hallucis m..
- D. 2-4 lumbrical muscles

20. The deep plantar arch:

- A. is formed primarily from the lateral plantar artery
- B. passes between the first and second muscular layers of the foot
- C. both
- D. neither

21. The arcuate artery

- A. is a branch of the medial plantar artery
- B. courses deep to extensor digitorum brevis
- C. both
- D. neither

22. The lateral plantar nerve:

- A. courses between quadratus plantae and flexor digitorum brevis muscles
- B. supplies quadratus plantae m.
- C. both
- D. neither

23. The two bellies of flexor hallucis brevis muscle:

- A. have insertions that contain sesamoid bones
- B. attach to the base of the distal phalanx of the great toe
- C. pass on either side of the tendon of extensor hallucis longus
- D. are innervated by the lateral plantar nerve
- E. all of the above

24. The tendon of peroneus longus:

- A. attaches to the navicular bone
- B. courses between quadratus plantae and flexor digitorum brevis muscles
- C. both
- D. neither

25. Which statement is false concerning the hip joint?

- A. it is a ball and socket joint
- B. the entire acetabulum articulates with the femoral head
- C. the acetabulum is deepened by the acetabular labrum
- D. the ligamentum teres is attached to the fovea on the femoral head
- E. the iliofemoral ligament attaches to the intertrochanteric line

26. Which statement concerning the hip joint is false?

- A. The transverse acetabular ligament bridges the acetabular notch
- B. The proximal attachment of the iliofemoral ligament is to the ASIS
- C. The acetabulum is formed by the ilium, ischium, and pubis
- D. The iliofemoral ligament prevents hyperextension of the hip joint
- E. Fractures of the femoral neck, rather than the femoral shaft, usually sever arteries supplying the femoral head

27. The fibular collateral ligament is

- A. tested by the application of valgus stress, rather than varus stress, to the leg.
- B. located superficial to the tendon of popliteus
- C. attached to the lateral meniscus
- D. located superficial to the biceps femoris tendon
- E. located deep to the iliotibial tract

28. The ____ ligament of the knee joint attaches to the ____

- A. lateral collateral __ shaft of fibula, deep to pes anserinus
- B. patellar __ anterior intercondylar area of the tibia
- C. posterior cruciate __ posterior surface of tibia. just above soleal line
- D. tibial collateral __ periphery of medial meniscus
- E. anterior cruciate __ anterior intercondylar area, just anterior to the anterior horn of the medial meniscus

29. True statements concerning the anterior cruciate ligament include:

- A. its attachment to the tibial plateau (top of tibia) is anterior to the attachment of the anterior horn of the medial meniscus
- B. it prevents posterior displacement of the femur on the tibia
- C. both
- D. neither

30. Important stabilizing structures on the lateral side of the knee joint are:

- A. tibial collateral ligament; biceps tendon; and iliotibial tract
- B. fibular collateral ligament; biceps tendon and iliotibial tract
- C. fibular collateral ligament; cruciate ligament; and pes anserinus
- D. tibial collateral ligament; popliteus tendon; and patellar ligament
- E. Fibular collateral ligament, coronary ligament, and transverse ligament

31. The major cutaneous innervation of the anteromedial side of the leg is provided by which nerve?

- A. obturator
- B. sural
- C. superficial peroneal
- D. saphenous
- E. medial sural

32. Which muscle attaches to the lesser trochanter of the femur?

- A. iliopsoas
- B. pectineus
- C. quadratus femoris
- D. gluteus medius
- E. obturator externus

33. The principle action of the gracilis muscle is .

- A. lateral rotation of the thigh at the hip.
- B. medial rotation

- C. abduction
- D. Flexion
- E. adducton

34. In the subsartorial canal this muscle separated the femoral artery from the deep (profunda) femoral artery:

- A. pectineus
- B. adductor magnus
- C. adductor brevis
- D. adductor longus
- E. psoas major

35. The neck of a femoral hernia lies lateral to the:

- A. pubic tubercle
- B. femoral vein
- C. femoral artery
- D. femoral nerve
- E. femoral sheath

36. A 50-year-old man complained of a lump in his groin. His physician suspected an enlarged superficial inguinal lymph node. What areas should be examined to find the source of the problem?

- A. skin of the buttocks
- B. skin of the scrotum
- C. both
- D. neither

37. The great saphenous vein

- A. passes anterior to the medial malleolus
- B. passes a handbreadth posterior to the medial border of the patella
- C. Both
- D. neither

38. This structure forms the boundary between the greater and lesser sciatic foramina:
ischial tuberosity

- B. posterior superior iliac spine
- C. sacrotuberous ligament
- D. sacrospinous ligament
- E. piriformis muscle

39. This is the only gluteal muscle to originate from the posterior surface of the sacrum:

- A. quadratus femoris
- B. gluteus maximus
- C. gluteus medius
- D. piriformis
- E biceps femoris

40. Nerve injury of sacral spinal nerve will result in pain located along the:

- A. anterior surface of the thigh
- B. anteromedial surface of the leg
- C. medial side of the foot
- D. lateral side of the foot
- E none of the above

41. If the sciatic nerve were damaged by an intramuscular injection in the buttocks, the patient would have diminished cutaneous sensation on the:

- A. dorsum of the foot
- B. anteromedial side of the leg
- C. both
- D. neither

42. All the following pass through the greater sciatic foramen EXCEPT

- A. piriformis muscle
- B. pudendal nerve
- C. sciatic nerve
- D. inferior gluteal vessels and nerve
- E obturator internus tendon

43. The superior gluteal nerve

- A. contains fibers from the second and third lumbar nerves
- B. leaves the pelvis just inferior to the piriformis muscle
- C. must be intact to resist pelvic tilt during gait
- D. innervates the piriformis muscle
- E innervates the gemellus superior muscle

44. All of the following muscles are lateral rotators of the thigh at the hip EXCEPT the

- A. gluteus maximus
- B. gluteus minimus
- C. obturator internus
- D. obturator externus
- E. piriformis

45. All of the following muscles are medial rotators of the leg EXCEPT:

- A. Semimembranosus
- B. semitendinosus
- C. biceps femoris
- D. gracilis
- E popliteus

46. Which statement about the semimembranosus muscle is FALSE?

- A. it extends at the hip joint
- B. it attaches to the medial condyle of the tibia
- C. it flexes at the knee joint
- D. it forms the arcuate ligament
- E it is innervated by the tibial portion of the sciatic nerve

47. Gracilis, sartorius, semimembranosus

- A. form the pes anserinus
- B. extend the knee
- C. act across both hip and knee joints
- D. all have the same innervation
- E. help laterally rotate the femur

48. What nerve has been damaged in a patient who can no longer extend his knee?

- A. Sciatic
- B. common peroneal
- C. femoral
- D. obturator
- E. tibial

49. What nerve has been damaged in a patient whose pelvis tilts too far toward the right when walking?

- A. right superior gluteal nerve
- B. left superior gluteal nerve
- C. right inferior gluteal nerve
- D. left inferior gluteal nerve
- E. right femoral nerve

50. Excessive anterior movement of the tibia when pulling forward on the leg with the knee flexed would indicate damage to this ligament of the knee:

- A. medial collateral
- B. lateral collateral
- C. anterior cruciate
- D. posterior cruciate
- E. oblique popliteal

51. The saphenous nerve

- A. is a motor branch of the femoral nerve
- B. accompanies the short saphenous vein in the leg
- C. is the only branch of the femoral nerve that extends considerably below the knee
- D. emerges through the saphenous hiatus
- E. is a sensory branch of the obturator nerve

52. What nerve is damaged in a patient whose foot is everted and dorsiflexed and who cannot flex his/her toes?

- A. tibial
- B. superficial peroneal
- C. deep peroneal
- D. common peroneal
- E. medial peroneal

53. The femoral sheath

- A. is found in the femoral triangle

- B. has a medially located compartment called the femoral canal
- C. contains the femoral artery, vein and nerve
- D. all of the above are correct
- E. only a and b above are correct

54. Fascia lata

- A. is the investing fascia of the thigh
- B. is fused with the inguinal ligament from the anterior superior iliac spine to the pubic tubercle
- C. is thickened laterally forming the iliotibial tract
- D. all of the above are correct
- E. only b and c are correct

55. The lateral compartment of the leg

- A. usually contains no major artery
- B. contains only two muscles
- C. both a and b are correct
- D. contains the peroneus tertius muscle
- E. includes muscles innervated by the deep fibular nerve

56. The biceps femoris muscle

- A. lies lateral to the popliteal fossa
- B. lies medial to the popliteal fossa
- C. forms the floor of the popliteal fossa
- D. gives rise to the oblique popliteal fossa
- E. does not attach to the leg bone

57. Where would you feel for the pulse of the dorsalis pedis artery?

- A. directly posterior to the tendon of flexor digitorum longus
- B. directly lateral to the tendon of tibialis anterior
- C. directly lateral to the tendon of extensor hallucis longus
- D. directly posterior to the tendon of peroneus longus
- E. directly lateral to the tendon of extensor digitorum longus

58. Which nerve has been damaged in a patient whose pelvis tilts down to the left when he stands on his right foot?

- A. right inferior gluteal nerve
- B. right superior gluteal nerve
- C. left inferior gluteal nerve
- D. left superior gluteal nerve
- E. left obturator nerve

59. The gluteus maximus muscle:

- A. has an origin from the ischium
- B. inserts only onto the femur
- C. is a flexor of the thigh at the hip
- D. is innervated by the superior gluteal nerve
- E. none of the above

60. The inferior gluteal nerve:

- A. contains fibers from the second and third lumbar nerves
- B. leaves the pelvis just inferior to the piriformis muscle
- C. must be intact to resist pelvic tilt during gait
- D. innervates the tensor fascia lata muscle
- E. innervates the gemellus inferior muscle

61. The nerve supply to the muscles of the lateral fascial compartment of the leg is directly by this nerve

- A. deep peroneal
- B. superficial peroneal
- C. anterior tibial
- D. posterior tibial
- E. common peroneal

62. The spinal cord segment that supplies the cutaneous innervation to the lateral side of the foot is:

- A. L3
- B. L4
- C. L5
- D. S1
- E. S2

63. The most important arterial supply to the head of the femur is via:

- A. the artery of the ligamentum teres
- B. retinacular vessels
- C. vessels traveling along the spermatic cord
- D. internal pudendal artery

64. If the foot is inverted due to paralysis of some muscles, one of the muscles that is paralyzed is the:

- A. tibialis posterior
- B. tibialis anterior
- C. peroneus longus
- D. extensor hallucis longus
- E. extensor digitorum longus

65. The blood supply to the anterior compartment muscles of the leg is normally:

- A. the anterior tibial artery, a branch of the popliteal artery
- B. the peroneal artery, a branch of the posterior tibial artery
- C. the deep femoral artery
- D. A and B above
- E. A and C above

66. The deep peroneal nerve supplies motor fibers to:

- A. peroneus longus
- B. peroneus brevis

- C. peroneus tertius (a portion of extensor digitorum longus)
- D. flexor hallucis longus
- E. all of the above

67. The anterior tibial artery:

- A. is normally a branch of the popliteal artery
- B. runs with the deep peroneal nerve on the anterior surface of the interosseous membrane of the leg
- C. usually terminates as the dorsalis pedis artery
- D. all of the above
- E. only A and B above

68. The following structures are in the femoral sheath, which is an extension of abdominal and pelvic fascias:

- A. femoral artery
- B. femoral vein
- C. deep femoral lymphatics
- D. fatty connective tissue
- E. all of the above

69. The branch(es) of the femoral nerve that extend into the leg proper (ie lower leg) is (are)

- A. the motor nerve to the vastus lateralis
- B. the common peroneal nerve
- C. the obturator nerve
- D. the saphenous nerve, carrying only sensory fibers
- E. all of the above

70. The anterior part of the talus articulates with the:

- A. cuboid
- B. first, second and third cuneiform bones
- C. fourth and fifth cuneiform bones
- D. calcaneus
- E. navicular

71. A barefoot child steps on a broken bottle and severs an artery on the medial side of the plantar surface of the big toe; the best place to apply pressure to stop bleeding would be:

- A. on the dorsum of the foot, between the tendons of tibialis anterior and extensor hallucis longus
- B. on the dorsum of the foot, between the tendons of extensor digitorum longus and peroneus tertius
- C. between medial malleolus and calcaneus
- D. between lateral malleolus and calcaneus
- E. on the plantar surface of the foot, between the first and second metatarsal bones

72. Severing the common peroneal nerve results in inability to:

- A. evert the foot
- B. extend (dorsiflex) the foot
- C. both

D. neither

73. When the foot is suddenly and violently inverted, the tuberosity of the fifth metatarsal may be avulsed (pulled off) by the tendon of this muscle:

- A. peroneus longus
- B. peroneus brevis
- C. peroneus tertius
- D. tibialis anterior
- E. tibialis posterior

74. The pulse of the posterior tibial artery is best felt:

- A. against the popliteal surface of the tibia
- B. lateral to the neck of the fibula
- C. anterior to the lateral malleolus
- D. posterior to the lateral malleolus
- E. posterior to the medial malleolus

75. Muscles inserting on the medial aspect of the proximal end of the tibia include:

- A. gracilis
- B. hamstring part of adductor magnus
- C. both
- D. neither

76. The patellar tendon reflex involves which spinal nerve?

- A. L1 and L2
- B. L3 and L4
- C. L4 and L5
- D. L5 and S1
- E. S2 and S3

77. Which statements concerning the quadriceps femoris is FALSE?

- A. The tone of quadriceps femoris is very important to the stability of the knee joint
- B. The final insertion of most of its fibers is to the tibial tuberosity via the patellar ligament.
- C. The lowest fibers of vastus medialis prevent medial displacement of the patella
- D. Much of the vastus lateralis and vastus medialis originate from the linea aspera

78. Each of the following matchings of thigh muscles with points of origin is correct EXCEPT:

- A. sartorius anterior superior iliac spine
- B. long head of biceps femoris ischial tuberosity
- C. straight head of rectus femoris anterior inferior iliac spine
- D. pectineus superior ramus of pubis

E. semitendinosus linea aspera of femur

79. Each of the following statements concerning the tibial nerve is true EXCEPT:

- A. It is a branch of the sciatic nerve.
- B. It is motor to all muscles in the superficial and deep compartments of the leg.

- C. It passes down the leg between gastrocnemius and soleus
- D. It passes posterior to the medial malleolus
- E Its terminal branches are the medial and lateral plantar nerves.

80. The muscle that contracts to unlock the extended knee joint is the

- A. popliteus
- B. plantaris
- C. medial head of the gastrocnemius
- D. lateral head of gastrocnemius
- E. soleus

81. Femoral hernias

- A. pass downward anterior to the inguinal ligament
- B. pass medial to the pubic tubercle
- C. emerge superior to the pubic tubercle
- D. utilize the lateral compartment of the sheath
- E pass downward posterior and inferior to the inguinal ligament

82. A sharp blow to the neck of the fibula is most apt to result in damage to which structure?

- A. sciatic nerve
- B. common peroneal nerve
- C. tibial nerve
- D. popliteal nerve
- E none of the above

83. Paralysis of which nerve would result in "foot drop"?

- A. femoral
- B. tibial
- C. superficial peroneal
- D. deep peroneal
- E obturator

84. Your patient is unable to stand on his toes. The damaged nerve is the:

- A. femoral
- B. tibial
- C. Superficial peroneal
- D. deep peroneal
- E sural

85. This artery passes posterior to the medial malleolus:

- A. posterior tibial
- B. anterior tibial
- C. peroneal
- D. dorsals pedis
- E arcuate artery

86. Tibialis anterior and tibialis posterior BOTH:

- A. invert the foot
- B. insert on the tuberosity of the navicular bone
- C. both
- D. neither

87. The flexor retinaculum of the foot attaches to which two bony structures?

- A. distal ends of tibia and fibula
- B. calcaneus and medial malleolus
- C. lateral malleolus and calcaneus
- D. medial malleolus and talus
- E talus and navicular

88. In a very young child, the head of the femur usually receives most of its blood supply from a branch of the:

- A. obturator artery
- B. external iliac artery
- C. femoral artery
- D. deep femoral artery
- E pudendal artery

89. The iliofemoral ligament:

- A. attaches to the anterior superior iliac spine
- B. resists flexion at the hip
- C. both
- D. neither

90. A form anterior cruciate ligament would permit:

- A. valgus displacement of the leg at the knee
- B. varus displacement of the leg at the knee
- C. anterior displacement of the leg at the knee
- D. posterior displacement of the leg at the knee
- E all of the above

91. The "spring" ligament attaches to what two bones?

- A. fibula and calcaneus
- B. tibia and calcaneus
- C. tibia and talus
- D. talus and navicular
- E. calcaneus and navicular

92. The ligament usually injured in a hyper-inversion of the foot (sprained ankle) is the:

- A. Anterior tibiotalar
- B. Posterior tibiotalar
- C. Medial collateral
- D. Lateral collateral

93. The anterior tibial artery:

- A. is the source of the peroneal artery

- B. continues as dorsal is pedis artery
- C. usually travels with the superficial peroneal nerve
- D. all of the above
- E none of the above

94. The gastrocnemius muscle can produce

- A. plantar flexion of the foot
- B. flexion of the leg at the knee
- C. both
- D. neither

95. The soleus muscle

- A. is innervated by the tibial nerve
- B. is a plantar flexor of the foot
- C. both
- D. neither

96. Which muscle inserts onto the tuberosity of the fifth metatarsal bone?

- A. Abductor digiti minimi
- B. Peroneus brevis
- C. Peroneus longus
- D. Tibialis anterior
- E Tibialis posterior

97. The muscles of the lateral compartment of the leg are:

- A. dorsiflexors of the foot
- B. evertors of the foot
- C. both
- D. neither

98. Which muscle is essential to lift the heel off the ground in walking?

- A. peroneus longus
- B. tibialis anterior
- C. fexor hallucis longus
- D. fexor hallucis brevis
- E gastrocnemius

99. The fibular collateral ligament is:

- A. tested by the application of valgus stress, rather than varus stress, to the knee joint
- B. located superficial to the tendon of the popliteus
- C. attached to the lateral meniscus
- D. located superficial to the biceps femoris tendon
- E located deep to the iliotibial tract

10. Which statement concerning ligaments of the hip joint is FALSE?

- A. the iliofemoral ligament prevents hyperextension
- B. the ligament of the head of the femur is attached to the transverse acetabular ligament
- C. the iliofemoral ligament is in the shape of an inverted Y

- D. the ischiofemoral ligament attaches to the intertochanteric crest
- E the transverse acetabular ligament bridges the acetabular notch

101. The deltoid ligament

- A. is attached to the talus, navicular and calcaneus
- B. is torn less commonly than the lateral ligament of the ankle
- C. both
- D. neither

102. The medial meniscus

- A. is torn less commonly than the lateral meniscus
- B. is much broader behind than in front
- C. is nearly circular (O- shaped)
- D. is separated from the joint capsule by the popliteus tendon
- E is attached to some of the inserting fibers of pes anserinus

103. The suprapatellar bursa

- A. communicates directly with the knee joint cavity
- B. is located superficial to the quadriceps femoris muscle
- C. both
- D. neither

104. Which one of the following structures attaches to the most anterior part of the tibial plateau?

- A. anterior cruciate ligament
- B. posterior cruciate ligament
- C. anterior horn of the medial meniscus
- D. anterior horn of the lateral semilunar cartilage
- E ligament of Wrisber

105. Which nerve is endangered during a canulation of the great saphenous vein?

- A. lateral sural
- B. medial sural
- C. saphenous
- D. superficial peroneal
- E medial femoral cutaneous

106. The sural nerve is located most closely to the

- A. inferior border of the gluteus maximus
- B. lateral malleolus
- C. great saphenous vein
- D. neck of the fibula
- E medial side of the patella

107. The best diagnostic test for the anterior compartment syndrome of the leg is to check for loss of cutaneous sensation on the:

- A. medial part of the plantar surface of the foot
- B. lateral part of the plantar surface of the foot

- C. dorsum of the foot, between the first and second toes
- D. dorsolateral side of the foot and little (5th) toe
- E anterolateral side of the leg

1	B			31	D			61	B			91	E
2	E			32	A			62	D			92	D
3	C			33	E			63	B			93	B
4	D			34	D			64	C			94	C
5	D			35	A			65	A			95	C
6	B			36	C			66	C			96	B
7	E			37	C			67	D			97	B
8	A			38	D			68	E			98	E
9	A			39	B			69	D			99	B
10	A			40	D			70	E			100	D
11	C			41	A			71	C			101	C
12	B			42	E			72	C			102	B

13	B			43	C			73	B			103	A
14	C			44	B			74	E			104	C
15	D			45	C			75	A			105	C
16	A			46	D			76	B			106	B
17	C			47	C			77	C			107	C
18	C			48	C			78	E				
19	A			49	B			79	C				
20	A			50	C			80	A				
21	B			51	C			81	E				
22	C			52	A			82	B				
23	A			53	E			83	D				
24	D			54	D			84	B				
25	B			55	C			85	A				
26	B			56	A			86	A				
27	B			57	C			87	B				
28	D			58	B			88	A				
29	B			59	E			89	D				
30	B			60	B			90	C				