IESO 2025 – Jining China
Field practical test
The items list (phenomena, processes, geological principles, earth system interactions)

1. Gneiss	35. Burial
2. Dyke/vein	36. Melting
3. Pegmatite	37. Slow cooling
4. Xenolith	38. Fast cooling
5. Volcanic rock	39. Intrusion
6. Plutonic rock	40. Cross-cutting
7. Metamorphic rock	41. Contact Metamorphism
8. Hypabyssal rock	42. Uplift
9. Spring	43. Chemical weathering
10. Landslide	44. Physical weathering
11. Foliation	45. Sedimentation
12. Layers	46. Lithification
13. Limestone	47. Randomly oriented crystalline structure
14. Dolomite	48. Preferred oriented crystalline structure
15. Clay	49. Biological weathering
16. Marl	50. Dissolution
17. Fossil coral	51. Crystallization
18. Shallow sea	52. Geosphere–biosphere interrelationship
19. Open sea	53. Geosphere–hydrosphere–biosphere interrelationship
20. Intrusive body	54. Geosphere–biosphere interrelationship
21. Regression	55. Geosphere–hydrosphere–atmosphere–biosphere interrelationship
22. Transgression	56. Geosphere–hydrosphere interrelationship
23. Aquifer	57. Horizontal bedding
24. Aquiclude	58. Tilted bedding
25. Initial horizontality principle	59. Cross bedding
26. Superposition principle	60. Schist
27. Chert	61. The present is the key to the past principle
28. Chalk	62. Transportation
29. Nature park	63. Spheroidal weathering
30. Coral fossils	64. Brittle (fracturing) deformation
31. Weathering crust	65. Ductile (folding) deformation
32. Regional Metamorphism	66. Strike-slip fault
33. Fold	67. Divergence (normal) fault
34. Lineation	68. Convergence (reverse) fault

Shimen Mountain:

The scoring system: Each question may have one or more correct answers. You will earn 1 point for each correct option selected and lose 0.5 points for each incorrect option selected with the proviso that the total score for any question will not go below zero)

All questions carry different points.

Stop 1:

Identify the four rock bodies marked as A, B, C, and D on the site.

1. Write the number/s from the items list, which describe only the body (not the process that created it). **(8 points)** (*There are some for which more than one item fits*).

Phenomena	**The item/s number that fits the phenomena**						
A	Dyke/vein	Plutonic rock	Pegmatite				
B	Gneiss						
C	Dyke/vein	Plutonic rock					
D	Dyke/vein	Plutonic rock					

2. Which of the following statements is the most appropriate one? The order of the events from old to young is **(1 point)** _____ **(d)**

a) B – C – D
b) C – B – D
c) D – C – B
d) B – D – C

3. Identify in the site the phenomenon marked as E. Which item from the list describes this phenomenon best? **(1 point)** —— **Strike-slip fault**

4. Look at the area marked with a tape. Which items from the list best describe this phenomenon best? (Multiple correct answers) **(2 points)**—— **44 Physical weathering, 49 Biological weathering**

Stop 2:

1. How many sets of joints can be observed in this outcrop? **(1 point) (c)**

a) 1
b) 2
c) 3
d) 4

2. Which item describes this structural phenomenon? **(1 point)**

The number of the item**: Landslide**

Stop 3:

1. Which item describes this phenomenon best? **(1 point)**

The number of the item**: (9)**

2. Which groundwater type best corresponds to the observed phenomenon here? **(1 point)**
(c)

a) Pore water

b) Karstic water

c) fissure water

d) Glacier water

Stop 4:

Identify on the site the five rock bodies marked as A, B, C, D, and E.

1. Write the number/s from the items list that identify the bodies, which describe only the body (not the process that created it). **(13 points)** (*there are some in which more than one item fits*).

Phenomena	**The item number(s) that fit the phenomena**				
A	1 Gneiss				
B	2 Dyke/vein	6 Plutonic rock	20 Intrusive body		
C	2 Dyke/vein	6 Plutonic rock	20 Intrusive body	33 fold	
D	2 Dyke/vein	6 Plutonic rock	20 Intrusive body		
E	4 Xenolith	6 Plutonic rock			

2. Which shearing direction corresponds to the formation of the structure of phenomenon C? **(1 point) (b)**

a) clockwise

b) anti-clockwise

3. Identify the item numbers that indicate related oriented structures in **(2 points)**

- Phenomenon A – Item number _____ (**7** Foliation)
- Phenomenon B – Item number _____ (**34** Lineation)

4. Which of the following sequences indicates events from the oldest to the youngest? **(1 point) (a)**

a) A – B – C – D

b) A – C – B – D

c) B – A – C – D

d) B – C – A – D

5. Observe the phenomenon marked as F.

Which planar structures can be observed at this site? **(2 points) (b, c)**

a) Bedding

b) Weathering surface

c) Foliation

d) Flow structure

6. Consider the oval, oriented pits marked as G. Which factors most likely contributed to their formation? **(2 points)**—— **(a, c)**

a) Foliation

b) Cleavage

c) Flow water

d) Fault

7. Observe the valley in front of stop 4. Which factors have contributed to the development of this topography? **(3 points) (a, b, c)**

a) Crustal uplift
b) Fluvial processes
c) Faulting
d) Glaciation

8. Choose item numbers of all processes in the rock cycle that were involved in the formation of the four stops at Shimen Mountain. **(9 points)**

The numbers of the items**:**

32	35	36	37	39	42	44	49	51									