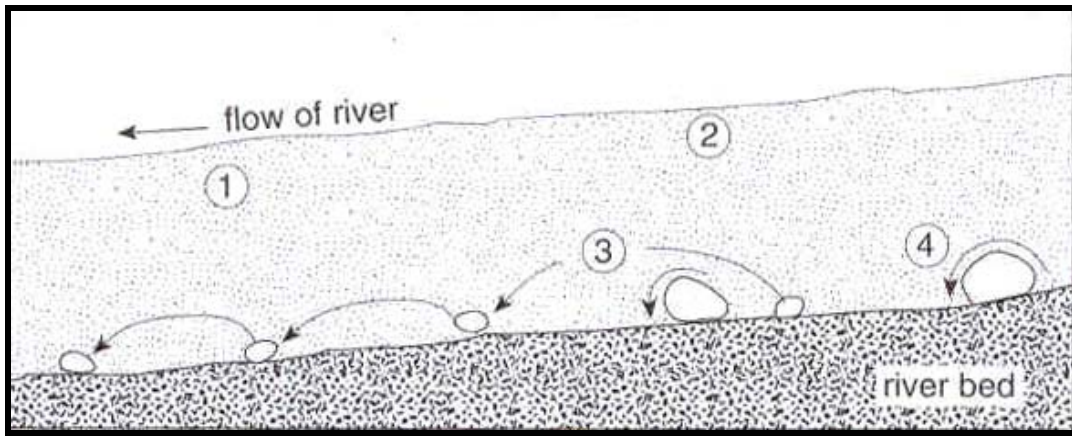


UNIT 3 TEST

You may mark on the test sheet but all answers must be recorded on your Scantron sheet in pencil. Make sure your name is on the sheet as well.

- 1 **The Thalweg is:**
 - a the bank of a river channel
 - b the centre of the river channel
 - c the deepest part of river channel
 - d a type of bend in a river
- 2 **Fluvial refers to:**
 - a water
 - b river flows
 - c movement of ice
 - d movement of sediment in a river
- 3 **Lacustrine refers to:**
 - a river flows
 - b lakes
 - c water
 - d movement of sediment in water
- 4 **The movement of sand along a beach is referred to as:**
 - a deposition
 - b sedimentation
 - c longshore drift
 - d saltation
- 5 **Which statement best describes the world's water supply:**
 - a there is a finite supply of water which constantly moves through a cycle
 - b as water is used up, new water is formed to replace it
 - c we can dump practically anything in the water, nature purifies it
 - d most of the water on the planet is frozen in the ice caps
- 6 **Tsunamis are large waves caused by:**
 - a alignment of solar and lunar tides
 - b bad karma
 - c sub oceanic geological events
 - d unusually high winds
- 7 **A drainage basin is:**
 - a an area drained by a particular river
 - b the area covered by a lake
 - c an ice formation found on top of glaciers
 - d an area that is isolated from the rest of the hydrologic cycle
- 8 **Which of the following is not one of the functions of a river?**
 - a deposition
 - b evaporation
 - c erosion
 - d transportation
- 9 **Which of the following involves "bouncing" material along the stream bed?**
 - a dribbling
 - b transportation
 - c traction
 - d saltation
- 10 **Large material carried by the river may be broken into smaller particles by:**
 - a attrition
 - b sublimation
 - c dissolution
 - d saltation
- 11 **A Hjulstrom Diagram shows:**
 - a Nothing at all
 - b A "Hjulstrom"
 - c not sure but it might be on the next page
 - d water velocity and particle sizes
- 12 **As the ice caps melt, there is less area to reflect sunlight, thus speeding the process. This is an example of a(n):**
 - a unfortunate coincidence
 - b case of bad luck
 - c feedback loop
 - d none of the above
- 13 **The local landforms (outside the windows!!) are mainly the result of:**
 - a volcanism
 - b sedimentation
 - c faulting
 - d glaciations
- 14 **The energy of a river is dependant upon:**
 - a Volume of water and gradient
 - b Transitional co-responding reflectivity
 - c Velocity and gradient
 - d Temperature and gradient
- 15 **Which of the following will not reduce a river's flow volume?**
 - a Sedimentation of the stream channel
 - b Flowing over permeable rock
 - c Low winter snowfall
 - d High temperatures
- 16 **Flooding is:**
 - a An extreme even which can be prevented
 - b A natural and predictable event
 - c Not normal for a "healthy" river
 - d None of the above
- 17 **Which of the following will not reduce a river's flow volume?**
 - a Sedimentation of the stream channel
 - b Flowing over permeable rock
 - c Low winter snowfall
 - d High temperatures
- 18 **Ideally, sewage treatment plants should be located on parts of a river that are:**
 - a Slow moving
 - b Prone to flooding
 - c Relatively high constant flows
 - d Going to someone else's city
- 19 **A "Century Flood" has water levels:**
 - a higher than "normal".
 - b that are reached only once in 100 years.
 - c that are more destructive than normal.
 - d lower than the highest flood in 100 years.



20 In the diagram above, number three indicates:

- a Traction
- b Solution
- c Saltation
- d Suspension

21 In the diagram above, number four indicates:

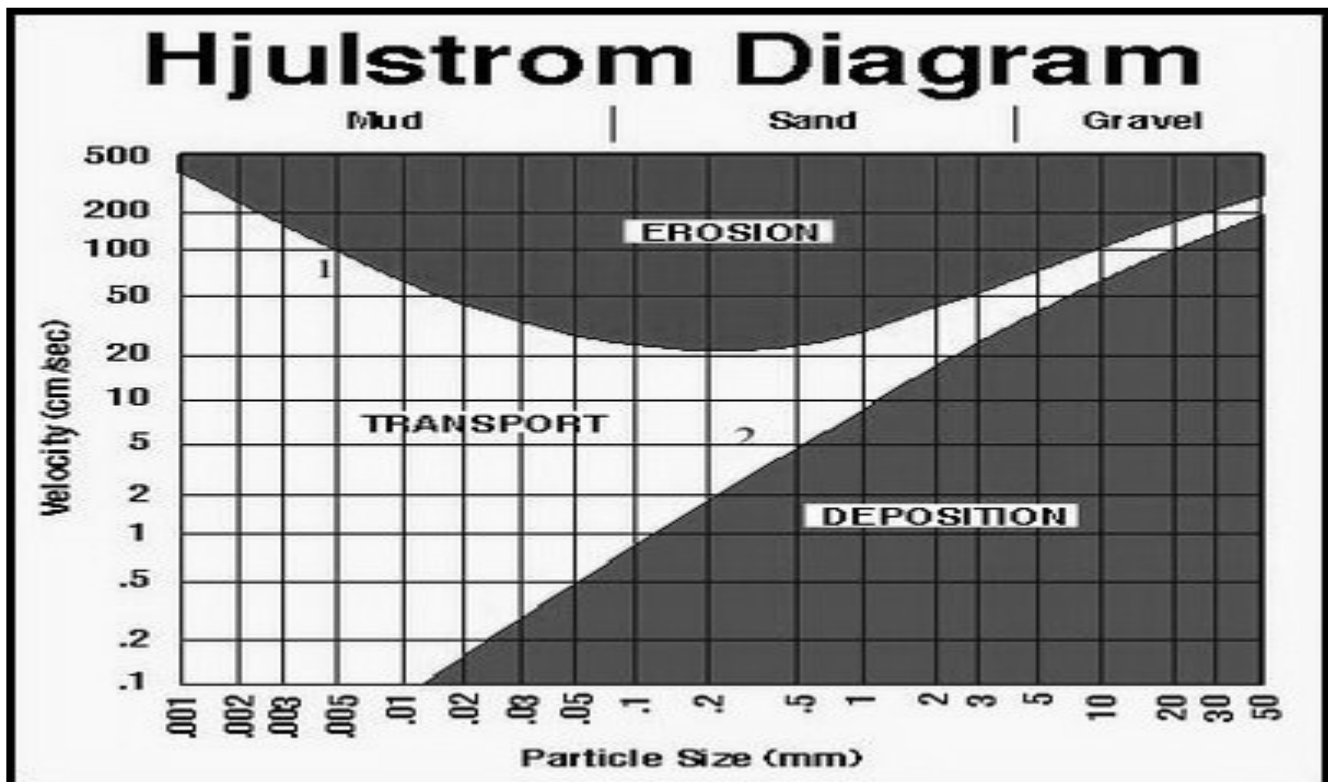
- a Traction
- b Solution
- c Saltation
- d Suspension

22 In the diagram above, number one and two are:

- a Traction and solution
- b Solution and suspension
- c Saltation and solution
- d Suspension and saltation

23 What will remove dissolved minerals from the stream?

- a A drop in flow velocity
- b Collision with other particles
- c Evaporation
- d gravity



24 Using the Hjulstrom Diagram, what type of particle is most easily eroded?

- a Very fine mud, 0.001 mm
- b Mud, between .01 and .02 mm
- c Sand with grains about .2 mm in size
- d Gravel, 50 mm and larger

25 Using the Hjulstrom Diagram, at what velocity will the largest particles begin to be dropped?

- a ~ 400 cm/sec
- b ~ 20 cm/sec
- c ~ 0.1 cm/sec
- d ~ 200 cm/sec

26 Using the Hjulstrom Diagram, at what velocity will the river begin depositing sand (0.1 mm)

- a 0 cm/sec
- b ~1 cm/sec
- c ~30 cm/sec
- d ~75 cm/sec

27 Using the Hjulstrom Diagram, what will be carried in a stream flowing at 2 m/sec?

- a Mud, sand and gravel
- b Gravel only
- c Mud and gravel
- d It is not possible to tell

28 A segment of river 4000 m long drops by 4 m. Calculate its gradient:

- a 10%
- b 1%
- c .1%
- d .001%

29 The river in the previous question would most likely be:

- a Practically a water fall!!
- b Fast flowing and filled with rapids
- c Moving slowly and constantly
- d Barely moving

30 What makes waves?

- a The motion of the earth
- b The pull of the moon
- c Dolphins and fish swimming
- d Wind

31 Wave size depends upon:

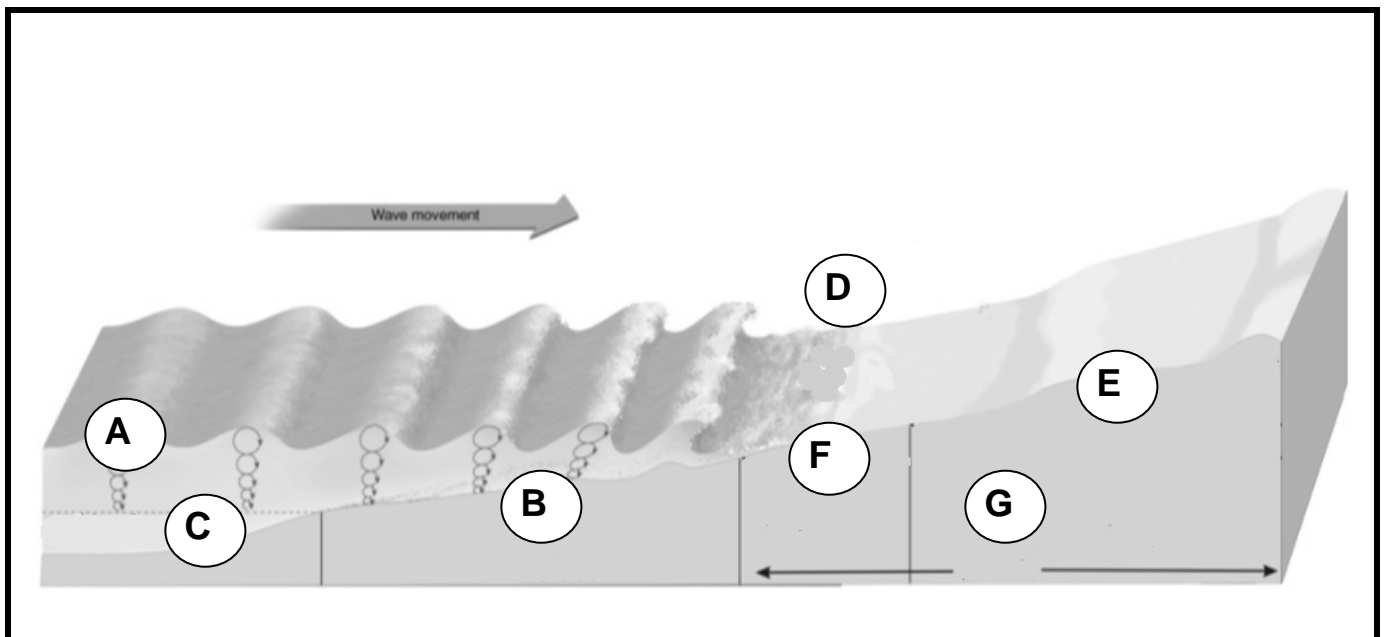
- a Water density and wind speed
- b Temperature and fetch
- c Fetch, wind speed and duration
- d How big the dolphins are

32 Fetch is:

- a Depth of the water
- b What you tell your kid brother to do when you want the remote
- c Clear distance the wind has over the water
- d Distance between wave peaks

33 The size of waves is:

- a Totally random and unpredictable
- b Easily calculated if you know how
- c Not connected to wind speed
- d None of the above



34 In the diagram, A marks:

- a offshore
- b fair-weather wave base
- c nearshore
- d beach

35 In the diagram, B marks:

- a offshore
- b fair-weather wave base
- c nearshore
- d shoreface

36 In the diagram, C marks:

- a offshore
- b fair-weather wave base
- c nearshore
- d swash zone

37 In the diagram, D marks:

- a offshore
- b fair-weather wave base
- c nearshore
- d swash zone

38 In the zone marked E the main force acting on sand is:

- a water
- b gravity
- c tides
- d wind

39 Material moves along beaches due to:

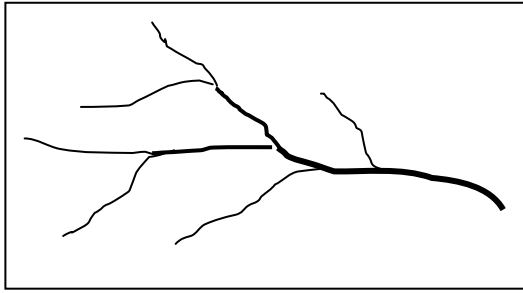
- a a strong desire to do so
- b saltation
- c longshore transport (drift)
- d tides

40 If waves approach perpendicular to the beach (ie straight in), the following may result:

- a longshore drift
- b saltation
- c rip currents
- d deposition

41 If you get caught in a rip current you should:

- a stay still, they sense fear!
- b swim directly toward shore
- c swim directly away from shore
- d swim parallel to the shore



42 How many first order streams are shown in the diagram?

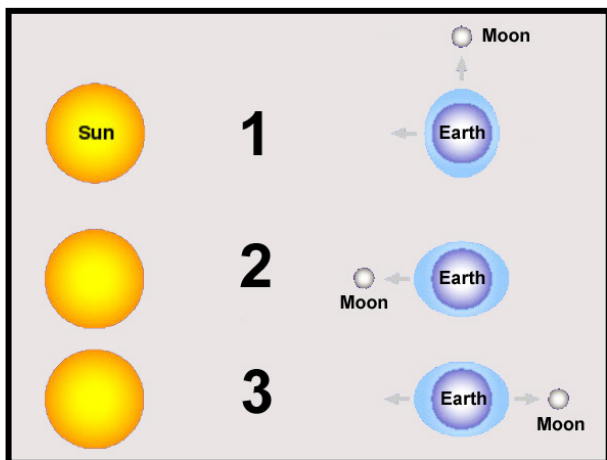
- a 4
- b 6
- c 1
- d 2

43 How many second order streams are shown in the diagram?

- a 4
- b 6
- c 1
- d 2

44 What is the largest stream order shown?

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

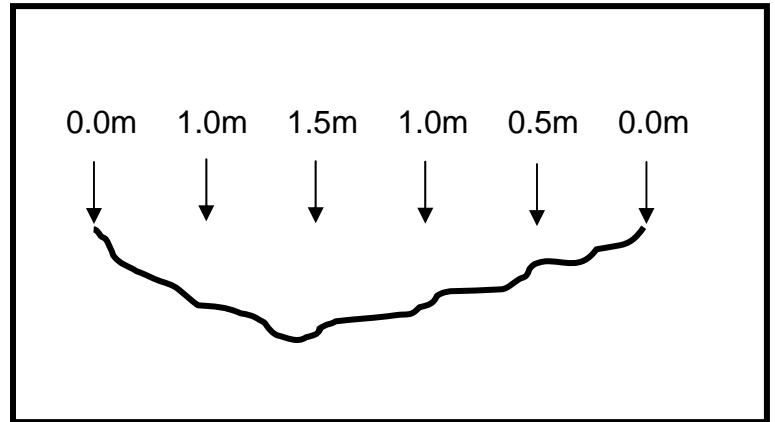


45 Which orientation would result in the maximum tides?

- a 1
- b 2
- c 3
- d Cannot tell

46 Which body has the strongest impact on tides?

- a sun
- b moon
- c both are equal
- d earth



47 Chanel depth is measured at 1m intervals as shown above. Calculate the cross sectional area of the stream.

- a 20 m^2
- b 4 m^2
- c 5 m^2
- d 16 m^2

48 An object dropped in the stream was timed over a 10m course. The following four times were noted: 10.1 seconds, 9.7 seconds, 10.4 seconds, 9.8 seconds. The average flow velocity of this stream is:

- a 10 m/s
- b 40 m/s
- c 4m/s
- d 1m/s

49 The flow rate for this stream is:

- a $4 \text{ m}^3/\text{s}$
- b $40 \text{ m}^3/\text{s}$
- c $16 \text{ m}^3/\text{s}$
- d $1 \text{ m}^3/\text{s}$

50 The thalweg depth of this stream is:

- a 1 m
- b 1.5 m
- c .5 m
- d .8 m

