1) D
2) A
3) E
4) A
5) B
6) D
7) C
8) D
9) B
10) C
11) A
12) A
13) D
14) E
15) A
16) E
17) C
18) D
19) B
20) A
21) Metals and rocks
22) Mostly solid.
23) Earth and Mars
24) Dried-up riverbeds, networks of channels, stream-lined islands, chemical evidence from rovers, gullies on crater walls, layered sedimentary rocks
25) Himalaya, any ocean trench or subduction zone, such as Japan, Aleutians, Andes, northwestern USA
26) Axial tilt, eccentricity of orbit
27) Carbon dioxide (CO_2)
28) Life, specifically photosynthetic life, on Earth produces O_2.
29) Earth and Io
30) Neptune
31) Four -Jupiter, Saturn, Uranus, and Neptune
32) Pluto
33) Large crater in 65 million year old rock in Mexico, global layer of iridium (common in meteorities, rare on Earth's surface), plus other possible answers.
34) Impact cratering
35) Astrometry, transits, eclipses, gravitational lensing
36) They are much closer to their parent stars than Jupiter is.
37) No. Current detection techniques are better at detecting heavy planets that light planets.
38) Helium

39) Temperatures.
40) Sunspots. They emit lots of radiation because they are hot (4000K). They look dark because they are next to hotter, brighter regions. The full Moon is much colder and emits less thermal radiation.
41) Crust created in 1 year =1 cm x 2000 km
= 1 cm x (1 km / 1000 m) x (1 m / 100 cm) x 2000 km
= 10^{-5} km x 2 X 10^{3} km =2 X 10^{-2} km^{2}

Crust created in 300 million years =3X 10^{8} x 2 X 10^{-2} km^{2}
= 6 X 10^{6} km^{2}

Area of Earth =4 pi R^{2}
R =6400 km
Area =4 pi x 6400 km x 6400 km =5 X 10^{8} km^{2}

Fraction of surface =6 X 10^{6} km^{2}/ 5 X 10^{8} km^{2}= 1.2 X 10^{-2} = 1.2%
42) Volume =Mass / density =10^{28} kg / (10^{3} kg/m^{3}) =10^{25} m^{3}
Volume =(4 pi R^{3})/3 so radius =cube root of (3V/(4pi)) =$(3V / (4pi))^{0.33}$
Radius =$(3 \times 10^{25}\ m^{3} / (4pi))^{0.33}$
Radius =$(2.4 \times 10^{24}\ m^{3})^{0.33}$ =1.1 x 10^{8} m
Diameter =2 x radius =2.2 x 10^{8} m

Angular size / 360 degrees =Diameter of Cherry / (2pi x distance from Earth)
Angular size =360 degrees x 2.2 x 10^{8} m / (2pi x 10^{17} m)
Angular size =1.3 x 10^{-7} degrees

43) Seafloor crust is younger, less thick, denser, different chemical composition, basalt rather than granite, narrow range of ages, formed at mid -ocean ridges rather than volcanoes above subduction zones

Seafloor crust is produced when material in the mantle melts and erupts onto the surface at mid -ocean ridges, forming basalt rock. Seafloor crust is destroyed when it is pulled back down into the mantle at subduction zones or ocean trenches, sliding beneath the less dense continental crust.

Continental crust is produced when descending seafloor crust becomes partially molten. This magma rises upwards, erupting out of stratovolcanoes. Since only part of the basalt rock has been melted, the new continental crust has a different chemical composition and is called granite rock. Continental crust is not usually destroyed by plate tectonics.

Most Mars volcanism took place in one area, Tharsis Bulge, rather than being distributed over the planet like Earth's volcanoes. Many other possible answers.